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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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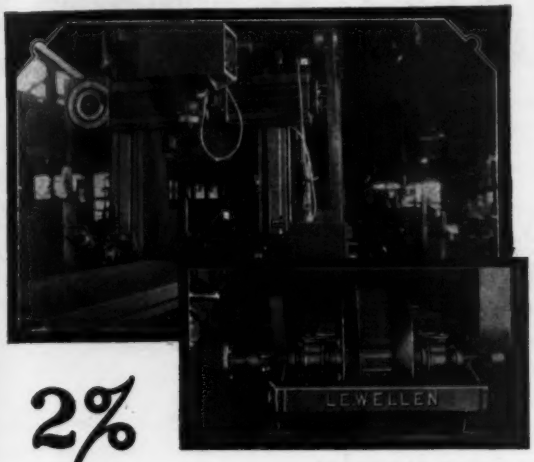

2% for Lewellen Speed Control

The photographs above show the giant milling machine used by Thomas L. Green & Company in the manufacture of biscuit machinery and the Lewellen Transmission that furnishes accurate speed control.

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Pioneers in Variable Speed Transmission Improvements

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALME' PRESIDENT — GEO. S. MACDONALD VICE-PRESIDENT & TREAS — F. K. HOPPIE SECRETARY

10 EAST 39TH ST. N.Y. U. S. A

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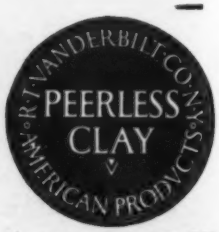


ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXIX. No. 23 NEW YORK AND CHICAGO Thursday, December 4, 1924

PAPER PRODUCTION FOR OCTOBER EXPANDS

Increase of 10 Per Cent Is Shown Over September According to Figures Reported By the American Paper and Pulp Association and Co-operating Organizations—During the Same Period Domestic Wood Pulp Production, According to Figures Reported Through the United States Pulp Producers Association Showed an Increase of 24 Per Cent Distributed Over All Grades of Pulp

The October production of paper in the United States, as reported by identical mills to the American Paper and Pulp Association and cooperating organizations, showed an increase of 10 per cent over September's production following a 2 per cent increase in September over August, according to the Association's Monthly Statistical Summary of the Pulp and Paper Industry. Every grade showed an increase in production over September.

The summary is prepared by the American Paper and Pulp Association, as the central organization of the paper industry, in cooperation with the Binders Board Manufacturers Association, Converting Paper Mills Association, Cover Paper Manufacturers Association, News Print Service Bureau, Tissue Paper Manufacturers Association, Wrapping Paper Manufacturers Service Bureau, and Writing Paper Manufacturers Association.

The figures for October for same mills as reported in September are:

Grade	Number of Mills	Production Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
News print	64	129,429	129,536	28,194
Book	63	91,319	90,764	36,706
Paperboard	100	114,430	114,477	33,376
Wrapping	84	51,309	53,332	59,724
Bag	24	9,152	8,890	6,268
Fine	82	26,197	26,734	39,978
Tissue	44	11,876	11,968	8,835
Hanging	8	5,831	6,613	2,724
Felts	20	17,987	18,186	3,148
Other Grades	53	20,055	20,202	13,578
Total—All Grades		477,585	480,702	232,531

During the same period, domestic wood pulp production increased 24 per cent, this increase being distributed over all grades. The October totals, mills identical with those reporting in September, as reported by the American Paper and Pulp Association, through the United States Pulp Producers Association, are as follows:

Grade	Number of Mills	Production Net Tons	Used Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
Ground Wood Pulp	97	92,449	94,585	4,071	124,024
Sulphite, News Grade	37	41,802	39,286	3,571	11,009
Sulphite, Bleached	20	22,738	19,117	3,913	2,146
Sulphite, Easy Blchg	5	5,882	4,336	552	1,465
Sulphite, Mitscherlich	6	7,338	6,507	945	465
Sulphate Pulp	11	15,673	14,712	2,140	5,326
Soda Pulp	12	17,479	12,661	4,079	3,240
Other than Wood Pulp	2	132	155	.....	33
Total—All Grades		203,493	191,359	19,271	147,708

To Cut Down Cost of Distribution

WASHINGTON, December 2, 1924.—A project for bringing together retail, wholesale and manufacturing interests of the United States in an effort to cut down the costs of distributing the wide array of articles for which the general public, as the ultimate consumer, pays was announced today by the Chamber of Commerce of the United States.

A conference of representatives of the three branches of merchandising activity will be held in Washington early in January under the auspices of the Department of Domestic Distribution of the National Chamber. It will consider the problem of distribution, compounded of all the factors that enter into the spread of the price of an article on its way from producer to consumer, and will formulate a program of investigation to be carried on by representative committees of business men and economists.

The recommendations of these committees, each dealing with a different phase of the inquiry, will form the basis of discussion at a final conference representing all branches of commercial activity involved in distribution, and a definite course of action to reduce the costs, which necessarily enter into prices, will, it is hoped, be evolved.

The undertaking of the National Chamber constitutes the first concerted attack upon the problem of distribution from the point of view of the distributor. The field of inquiry which the forthcoming conference will cover is for the most part unexplored. It has at times been criticized as the field of greatest price expansion. In support of this criticism it has been asserted by one set of investigators that of each dollar spent by the consumer almost half, 49c, goes to pay for the costs of distribution and all that it entails. Whether this is correct or not, the purpose of the conference, as announced will be to point the way by which expenses in this field may be reduced.

Genesee Paper Mills Buy Mill at Scottville

[FROM OUR REGULAR CORRESPONDENT.]

SCOTTVILLE, N. Y., December 2, 1924.—The boxboard mill of this place formerly operated by the Scottville Paper Box Board Corporation and the Flower City Tissue Mills Company of Rochester has been purchased by the Lawless Brothers Paper Mills of East Rochester and a company to operate the plant has been incorporated under the style of the Genesee Paper Mills, Inc. The mill was built in 1918.

The mill will make single and double lined light patent coated specialties and other high grade box boards. Joseph Eilers, of Norwich, Conn., who has had a wide experience in the manufacture of high grade box board, will be the manager of the mills.

Southern Kraft Prices

NEW ORLEANS, December 2, 1924.—The range of prices on Southern Kraft during the past week as reported today by the mills to the Southern Kraft Manufacturers' Association is from $4.58 to $5.18 per hundredweight in carload lots, f. o. b. mill.

CHICAGO LOOKS FOR HEAVY BUYING AT START OF 1925

Fine Paper Demand Has Fallen Off a Trifle But Everyone in Coarse Paper Division is Busy—Boards, Containers and Paper Stock Grow Stronger—Next Meeting of Box Board Association to Be Held in Chicago on December 17—Julian Armstrong Launches Campaign for Better Packing of Fruit—G. R. Browder Addresses Western Canners Association—Paper Trade Activities.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., December 1, 1924.—A slightly lesser demand in most of the fine paper grades is expected to be the rule between now and the first of the new year. As a matter of fact, it is not quite so strong as it was for the past month or more. It is also opined that a quantity of business is being held up until after 1925 dawns. This should mean a period of heavy paper buying early next year. In the meantime, the mills will have opportunity to catch up entirely on orders and start out with a clean slate. Reports here are to the effect that paper producers of the upper grades are only about two weeks behind on orders at the most. This includes bonds, writings, ledgers and coated papers. Prices on all fine grades rule firm with tendencies to strengthen. Concessions are a thing of the past so far as the current market is concerned. There is plenty of business available without special attractions in the way of cut figures. Printers are quite busy, having had to speed up activities only in the last three weeks. All of them are running on full schedules, with considerable new work coming in at a steady rate.

Everybody Busy in Coarse Paper Division

Business continues at a gratifying pace in the coarse paper division of the market. Fast depleting stocks sent the real consumers back to the sellers when trade in general picked up. With national prosperity ruling at present, coarse paper purchasers find it a task to keep reserves at the safety level. They are required to do constant buying to be able to do this. In the Chicago territory, coarse paper merchants are enjoying a brisk trade with every indication that it will run well into 1925. Prices are firm with an aptitude for upper levels, especially in the higher grades of kraft and manilas. Both large and small consumers are active.

Boards, Containers and Paper Stock Stronger

With an upturn for the better having started, board and container factors feel greatly encouraged, believing that the real market is returning to give them an opportunity to do some real business. Until the present it has been anything but satisfactory and sales have come hard and slow, more often only after much persuasion in the way of concessions. But with one or two of the items in this branch showing a stronger tendency, principally manila lined chip, there is hopes that this may be the introduction to a more profitable period.

The effect of a strengthening board market is evident in the paper stock industry. It seems that the mills are getting busy enough to force them back into the Chicago market, whereas, under very light schedules they buy from the nearest local point. There is a better feeling among all members of the trade and it is pretty certain that demand will quicken very shortly. Rumor of an advancing market about December 15 is heard and it seems quite definite. However, consumers of paper stocks are buying rather slowly inasmuch as they are approaching inventory season when as low stocks as possible are desired.

Box Board Association Meets Again December 17

The last regular meeting of the Box Board Association was held at the New Roosevelt Hotel, New York City, on Monday, November 17. Only routine business came before the members. John R. Mauff, executive-vice-president of the organization, with offices in the Wrigley Building, announces that the next meeting will be held on December 17, at the Congress Hotel, Chicago. The meeting will begin promptly at 10:30 a. m.

Julian Armstrong Campaigns for Better Fruit

Julian Armstrong, president of Julian Armstrong, Inc., Chicago, makers of the patented Fibopak container, has been appointed director of the Consumer Package Department of the Florida Citrus Exchange. A new size of Fibopak is now being made, the one-quarter bushel, of which the Florida Citrus Exchange will use between five and ten million next season to ship out of Florida all the fruit raised by members of the Exchange. Mr. Armstrong is now working on the fulfillment of this contract. Another improvement in Fibopak is the seal of metal which securely fastens the cover in place, preventing it from being removed unless cut by some sharp instrument.

A campaign to sell more and better fruit is now being conducted by the Florida Citrus Exchange, which campaign Mr. Armstrong was instrumental in inaugurating.

Addressed Canners Association

On Monday and Tuesday, November 24 and 25, the Western Canners Association held a two-day convention at Hotel Sherman, Chicago. One of the speakers at this event was G. R. Browder, general manager of the National Container Association who spoke briefly of the developments of the container for the shipment of canned goods. Mr. Browder outlined the research work conducted by the National Container Association at Mellon Institute where practical questions of manufacture are studied and the serviceability of a container determined in advance of its actual use.

Mr. Browder urged the canners to provide suitable sealing devices for making up and closing fibre boxes so that they will carry well; also to see that all cases of whatever kind are well stowed in cars so that all floor space lengthwise is utilized. He pointed out that during the past year there has been a constantly increasing use of fibre containers in the shipping of canned foods from the Pacific Coast, through the Panama Canal to the Eastern Seaboard and a corresponding trade in the reverse direction. Steamships to West Indies, Central and South America are accepting these containers as a part of the general cargo. In closing, Mr. Browder mentioned eight outstanding qualities of the fibre container as an ideal carrier for canned goods of all varieties.

Activities of the Paper Trade

Several members of the Champion Coated Paper Company were moving around the country last week. Alexander Thomson, vice-president spent his Thanksgiving in New York City. Bob Butterworth, manager of the Chicago office, left on Tuesday evening, November 2 for a trip through the southwest. H. W. Sutter, assistant sales manager, came to Chicago for a few days this week from Hamilton, Ohio.

Word has been received by many of his Chicago friends from W. E. Dwight, president of the Dwight Bros. Paper Company, that he arrived safely at Naples, Florida, where he expects to spend the winter months.

Norwegian Paper and Pulp Exports

WASHINGTON, D. C., December 3, 1924.—Conditions in the Norwegian paper and pulp industry during September were satisfactory. The exports during that month reaching $4,149,000 according to a report to the Paper Division of the Department of Commerce from Acting Commercial Attache Sorenson at Copenhagen. Paper exports were reported to have reached 23,228 long tons of which 12,279 tons consisted of news print. Shipments of mechanical groundwood and chemical pulp amounted to 55,776 tons and 20,339 tons respectively.

PAPER SECURITIES ADVANCE ON THE MONTREAL EXCHANGE

Other Companies May Follow Abitibi Power and Paper Co. in Listing Stocks on New York Stock Exchange—Efforts to Refinance Whalen Pulp and Paper Mills—Timber Limits Sold at Auction Bring a Record Price—J. D. McArthur Makes Statement in Defense of His Application for Pulpwood Concession, Declaring That $5,000,000 Will Be Spent on Proposed Plant.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., December 1, 1924.—During the past week there has been a marked revival of interest in paper securities on the Montreal Stock Exchange, and the stocks of most of the leading pulp and paper companies have shown appreciable advance in market value. For some time past, there has been quite a bearish attitude in regard to paper stocks owing to the fact that there is some over-production and that new mill extensions are coming along faster than it was thought the market could absorb the output. But lately there have been indications that this situation is not proving so disastrous as many figured out would be the case. In fact, there has been somewhat of a revulsion of feeling and where there was insistence that news print was likely to continue further downward, possibly to the $65 level, there is now a disposition to feel that after all a steadier tone may prevail in the news print market and that the natural increase of consumption in Canada's chief market across the border will eventually absorb what over-production there has been, or will in the future be created. It is also becoming recognized that a readjustment has been going on in the cost of production and that today a reasonable profit can be made from the readjusted price of the commodity. The present situation as regards price has created a better feeling among consumers so that there is not likely to be further efforts made to unsettle the price. If, as is consequently believed, the readjustment process has, through the operation of natural laws, in conjunction with supply and demand, worked out to its logical conclusion, there might well be a more confident feeling regarding the future of the industry. It is one which is of vast importance to Canada and is destined to be very much bigger in the years to come.

Canadian Paper Stocks in New York

The fact that the common stock of the Abitibi Power and Paper Company has been listed on the New York Stock Exchange and will be traded in there as in Montreal and Toronto opens up interesting possibilities. It is thought that it may result in a general move on the part of Canadian news print owners to list their preferred and common stock on the New York Stock Exchange. The companies mentioned are likely to follow the Abitibi example are the Spanish River, Laurentide, St. Maurice, Price Brothers and Brompton. Opinions are expressed both for and against such a move. On one hand, it is held that the Canadian market is carrying more paper securities than it can be fairly expected to bear and, therefore, more than is consistent with market activity and progress. On the other hand, it is held that listing of the stock in Wall Street would be tantamount to giving control over an important Canadian industry to Americans, and would mean subjecting the stock to a strong speculative influence of New York brokers and specialists.

Whalen Pulp and Paper

The special committee of the debenture holders of Whalen Pulp and Paper Mills, Vancouver, B. C., is endeavoring to work out a plan for the refinancing of the company, and is keeping in view the advantage of the construction of a news print mill to provide a market for some of the company's pulp production. At a meeting of the company, a report on the properties was given by Alexandre MacLaren, of Buckingham, Que., who spent several weeks at the company's mills in British Columbia. It was reported that a large quantity of timber had been cut and left lying in the woods for nearly a year, but lately steps have been taken to use this in the manufacture of pulp. Up to the present over $2,200,000 of debenture stock has been deposited under the terms of the deposit agreement. Although the time limit for making deposits expired on August 1, it was decided to extend the time for a couple of months. A special committee consisting of Hon. T. W. McGarry, K. C.; Alexander Maclaren and T. F. Cole has been appointed to deal with plans for reorganization and the question of the sale of the properties and also to meet the first mortgage bondholders and discuss these questions with them. The opinion was expressed that if new capital could be interested to the extent necessary to commence the addition of a news print mill, the company could be pulled through and made a success.

Record Price Secured for Timber Limits

Timber limits covering an area of about 130 square miles of provincial forest lands has just been disposed of by auction at the Legislative Buildings in Quebec, under the hammer of F. X. Lemieux, deputy minister of lands and forests. In addition to the remarkable interest evinced in the sale by the big lumbering concerns, who were all represented by their respective buyers, the outstanding feature of the sale was the record price of $6 over the ordinary stumpage dues given for one parcel of timber. The ordinary stumpage amounts to $2.70, and the best previous record obtained was only $3.55. The results of the sale were as follows: Malartic township, eight square miles, adjudged to Hyacinthe Beauchemin, for five cents over the ordinary stumpage dues; Varsan township, sixty-four square miles to Frank Blais for fifteen cents; Poularies township, to Eugene Rouleau, at twenty cents; Destow township, 25 square miles, to Eugene Rouleau, 15 cents; Barraute township, three square miles, to J. A. Cloutier, at five cents; Trecession township, one square mile, J. A. Cloutier, sixty-five cents; Launay township, seven square miles at five cents to Eugene Rouleau; Manneville township, one square mile to H. Gallant at five cents; Languedoc township, one square mile, Cloutier at five cents; Dalquier township, three square miles, $6; Berry township, two square miles, ten cents to O. Gallant; Tiblemont township, two square miles at five cents; Lestre township, three square miles, to J. B. Beck, at five cents. In addition to paying the dues, as above stated over the ordinary amount, the permittee must pay $500 per square mile.

Promise to Spend $5,000,000 on Mill

In defense of his application for a pulpwood concession, to be used in connection with the plan for building a news print mill at St. Boniface, Manitoba, J. D. McArthur, makes some interesting statements. The terms under which tenders for the pulpwood limits were called by the Dominion Government had been criticized as unfair, and Mr. McArthur in a letter to the press, has been answering these criticisms. In connection with this he states that he has been working on this proposition for the past three years and knows the difficulty of financing an industrial plant of this magnitude. He also declares that he has some knowledge of the present news print market and goes on: "I feel certain that if this proposition is killed now, it will be many years before it will be revived and in the meantime our sister province of Ontario will be reaping a rich harvest from the developments recently commenced in Port Arthur, Fort William, Kenora and other Western points. Let me give you a few figures. For a 200-ton news print mill at least 700 permanent employees will be required. In 1922, for the production of 1,366,815 tons of paper, there were employed 25,830 employees, the total payroll being $32,918,955. On the same average a 60,000-ton per year plant would employ 1,160 permanent employees, with a payroll of $1,445,000. In the logging operations, to take out 85,000 cords of

(*Continued on page* 40)

PHILADELPHIA EXPERIENCES ACTIVE SPECIALTIES DEMAND

Greatest Improvement Reported in Fine Papers Although Coarse Papers Respond to Seasonable Demand—Plans Made for Graphic Arts Dinner on January 8—Jessup and Moore Producting Greater Tonnage of Pulp—Utility Paper Co. in New Quarters—Franklin Paper Co. Add Many New Grades of Specialty Paper Used as Substitute for Leather and Imitation Leather.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., December 1, 1924.—Closing days of November brought to the Philadelphia paper distribution trade a most active demand for a large number of specialties. Although the greatest improvement was confined to certain grades of fine papers used in the printing and publishing trades there also was a seasonable demand for some of the coarse papers used in the larger manufacturing industries.

The leadership for the upward swing in the local paper market was assigned to the fine paper division where a noteworthy evidence of the preparation for a more active industrial life in the New Year was brought to the attention of the dealers in the actual orders of larger quantities of specialties used for the exploitation of business in the printed page. Large printing, lithographing and publishing establishments have been buying in quantity lots extending into tonnage size orders, books, covers and other papers used for advertising purposes. The higher priced papers still are being bought in small quantities but the lower priced grades are now moving in greater volume. Prices have not advanced beyond the early Fall quotations although the dealers are looking forward to slightly higher values if the improvement continues.

Seasonable Activity for Coarse Papers

Resumption of manufacturing industries on a broader scale with the advent of the new year is evidenced in the freer markets for the coarse paper divisions. Hat manufacturers, electrical appliances, hardware and other large industries which dominates the industrial world of this city, are now in the market for larger quantities of krafts, corrugated products and other specialties. Those dealers who did not take advantage of the generous mill offering of Krafts at the low prices prevailing during the heavy competition of the midsummer days are now experiencing difficulty in receiving prompt mill shipments to meet present demands. The mills having disposed of the stocks on hand and with their curtailed operations are not able to take care of the incoming orders at an early date.

Report of Federal Reserve Bank

In its report just issued on the employment and wages in the paper and pulp industries in the States of Pennsylvania and New Jersey, in that territory coming under the supervision of the Local Federal Reserve Bank and compiled by the Commonwealth of Pennsylvania, it was shown that during October there was a decline in the employment schedule of 0.3 per cent over September in the 11 plants reporting in Pennsylvania with a general wage increase of 7.0 per cent and an average wage increase of 7.3 per cent. In the 10 New Jersey plants reporting it was shown that the employment fell 1.0 per cent and the general wages increased 0.5 per cent with the average wage increase 1.5 per cent.

Graphic Arts Dinner Planned

Following out the custom instituted two years ago by the local Paper Trade Association and the Philadelphia Typothetæ there will be given an Annual Graphic Arts Dinner on January 8. While the date has been set no definite decision has been reached as to the place of the gathering although it is probable that the Manufacturers' Club will be selected. The tentative plans were arranged at the monthly meeting of the Philadelphia Paper Trade Association held in the Bourse Restaurant during the week when members of the Typothetæ and the Paper Trade met for the purpose of appointing a Joint-Committee of supply men and printers to attend to the details of entertainment, selection of place and the issuance of invitations and other features of the program. Those who attended the meeting were Arthur B. Sherrill, Reigel & Co.; Norbert A. Considine, Paper House of Pennsylvania; George W. Ward, D. L. Ward Company and Howard Satterwaithe, Garrett Burchanan Company representing the Paper Trade while the Typothetæ was represented by S. Clayton Wicks, Biddle Paret Press and Paul Gibbons. By special invitation Ralph Luft of the D. L. Ward Company was invited and appointed Treasurer in recognition of his valuable services rendered in connection with last year's dinner. Other members appointed to the Joint Committee were Harry Donahue, Molten Paper Company; W. T. Innes, Innes and Sons, and Julius Weyl, Edward Stern & Co.

Jessup and Moore Pulp Increase

Through the installation of additional digesters the Jessup and Moore Company, with Philadelphia headquarters in the Commonwealth Trust Building, has been provided with adequate facilities to effect a large tonnage increase in the production of pulp in its mills devoted to pulp manufacture. The two pulp mills, the Delaware Mill in Wilmington, Del., and the Radnor Mills, Elkton, Md., now are producing large quantities of soda pulp for the firm's own use and for distribution to other paper mills. With this increased pulp production the Jessup and Moore mills known as the Rockland Mills, Rockland, Del., and the Kenmore Mills, Provident Station, Md., are producing more tonnage in high grade books, magazine and other quality paper products used by the printing and advertising trades. All the mills are now operating on full time schedule with enough orders on hand to assure this speed of operation for a long period.

Franklin Paper Co. Increase Lines

With the addition of many new grades of specialty papers used as substitutes for leather and imitation leather or cloth products, the Franklin Paper Company, is now marketing 25 different kinds of papers perfected in the firm's own laboratories. These leather and imitation leather substitutes were developed in the Camden, N. J., factories and are marketed under the Frankote brands. Among the recent additions to the stock of specialties is that of odd heavyweight, waterproof papers used in the manufacture of trunks and chests instead of leather or cloth. Recently the Franklin Company opened up a department devoted to the distribution of imported papers and featuring Swedish Krafts of all grades.

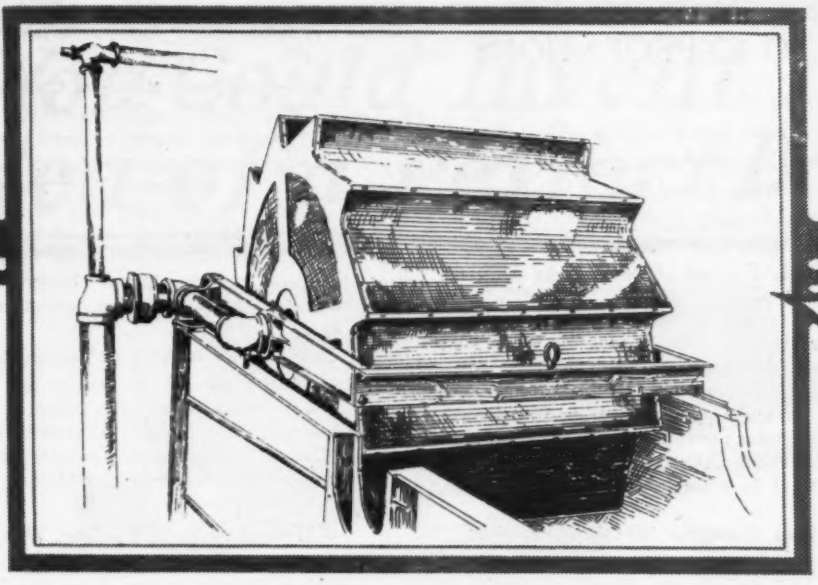
Utility Paper Company in New Quarters

Ned Hawes who formerly was engaged in the manufacture of wax papers at 1721 N. 2nd street, is now conducting a jobbing business with headquarters on the third floor of the building at 810 Sansom street. The distribution company is known as the Utility Paper Company and distributes a line of wax products similar to those which the Hawes Paper Company manufactured in the old location. In addition there is being conducted an importing business for the various grades of wax and specialty wrappings, wax parchments and fancy wrappings which the firm carries.

Japan Paper Company Importations

Upon the return of Vice President Thomas N. Fairbanks, of the Japan Paper Company, from his extended buying trip to the paper markets of Japan this week, the importing firm will introduce a varied assortment of Japanese printing and engraving and social stationery papers. The returning Vice President has been abroad for several months supervising the purchase of a large stock of various grades of Japanese papers which were inspected and stocked in the warehouse in the Yokohama branch of the company ready for

(*Continued on page* 38)



You've never seen a washer like this

The New Dilts Siphon Cylinder Washer

Washes 1,000 pounds of stock better in 40 minutes than a hexagonal bucket washer can in two hours.

Handles a 5-inch stream of water under 15 pounds pressure.

Requires no power. It is driven by circulation of stock in the tub yet it does not retard circulation.

Has practically no maintenance cost. No driving belt, gears or raising rackets are needed.

You will want one of these new washers on every beater tub. Write us.

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

7457

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

PAPER DEMAND IN TORONTO NOT UP TO EXPECTATIONS

Fine Paper Distributors Report November on the Whole Not as Satisfactory as the Month Just Preceding—Price Revisions on Book Papers Show an Advance of One Quarter Cent Per Pound—Daverin Paper Mills, Ltd., Incorporate to Operate Plant at Camden East, Formerly Owned by the Lennox Paper Mills, Ltd.—Great Lakes Paper Co. Will Probably Begin Erection of News Print Mill.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., December 1, 1924.—Market conditions were rather dull with the paper trade during the past week and November was on the whole not as good a month with the distributors of fine papers as were October and September. It is difficult to account for this, although one dealer reported that, in his opinion, it was largely due to the uncertainty regarding the continuance of the long price list, which was to have been abolished a fortnight ago but is still in effect.

The members of the Toronto Typothetæ have been opposing the threatened revision to net price lists, which, although gotten out by a number of jobbers, have been withheld and the long price list yet continues.

During the past week a conference was held between the members of the Toronto and Montreal trade and representatives of the Typothetæ of both cities. The whole situation was discussed in a mutual, conciliatory spirit and there is now no desire on the part of the jobbers to quarrel with their customers, particularly at a time when trade conditions are not any too brisk in the distributing line. A disposition to give and take has been manifested on both sides. While no official information has been given out regarding the decision arrived at by the conference, it is learned that the paper merchants showed a willingness to reconsider their attitude and it is possible they may accede to the request of the Toronto printers and retain the long price list. This question will not be fully decided until some time this week when another gathering of the paper merchants will be held in Toronto.

Some Revisions in Mill Prices

During the past week there was a revision on the mill prices on book papers which amounts to an advance of about a quarter of a cent per pound on all grades, or five per cent in round figures. A few months ago the mills reduced their prices by about half a cent but contend now that overhead costs are so high, they cannot continue making paper at the old rate and so have put the new schedule into effect. There has also been a readjustment of prices on colored kraft paper, for which there is an increased demand. Machine finish is still selling at 7 cents and M. G. kraft at 7.15 cents. Toilet and tissue papers are in active requisition at present and there has been quite an improvement in coated papers, which is welcomed by the mills, which have been rather quiet for many months. Other lines remain about the same. Envelope producers report business as only moderately active and paper box manufacturers are not busy except on some fancy and seasonable specialties. Board mills continue to operate at about seventy-five to eighty per cent capacity.

Safety Work in Northern Mills

A. P. Costigane, of Toronto, safety engineer of the Ontario Pulp and Paper Makers Safety Association, recently visited the paper mills of the Spanish River Mills at Espanola and Sturgeon Falls, and found much interest taken in the work. The recommendations made by the Association are being put into effect and the installing of a plant nurse by the mills is working out admirably. In time, cases of infection from minor diseases will be eliminated or greatly reduced. Mr. Costigane states that the management and men of the mills are arriving at the conclusion that in order to control cases of infection it is advisable to have a plant nurse in charge of first aid.

Daverin Paper Mills Get Charter

The Lennox Paper Mills, Camden East, Ont., are now known as the Daverin Paper Mills, Limited, a charter having been granted to the new organization, which has an authorized capital of $350,000. The incorporators of the company are L. S. and W. E. Houpt, of Buffalo, N. Y., and Dan Daverin, who was for several years superintendent of the Montrose division of the Provincial Paper Mills, at Thorold, Ont. Mr. Daverin is the manager of the new company which took over the plant at Camden East after it had been idle for several months and book and other papers will be turned out.

New Charter Granted to Toronto Mill

A provincial charter has been granted to the Hinde & Dauch Paper Company of Canada, whose plant is located in Toronto, and, is empowered to take over the assets, undertaking and good will of the Hinde & Dauch Co. The company manufactures jute and chip test container boards, fiber boxes, corrugated boxes and wall board, with an output of fifty tons daily.

Will Erect News Mill at Fort William

J. H. Black, of Toronto, who is president of the Great Lakes Paper Company, Fort William, Ont., states there is every probability of the company going on with the erection of a large news print mill in the spring. The first unit will be one hundred tons and the ultimate capacity will be three hundred. The contemplated outlay on the work to be carried on during the coming year will amount to about three million dollars. The ground wood pulp plant of the company is busy, turning out about one hundred and thirty tons daily. It is expected that production will be speeded up to one hundred and sixty tons before long. The power supply of the company will be increased from 7,500 to 20,000 horse power.

Noted Visitor from the Antipodes

Sir Mark Sheldon of the firm of Carmichael & Co., paper dealers of Australia and New Zealand, is visiting Canada and during the past week was entertained by the paper trade in Montreal and Toronto. Sir Mark's firm is the export agent of the Provincial Paper Mills, Toronto. The noted visitor was tendered a complimentary banquet by the trade in Montreal. Speaking of conditions in the paper line in Australia, Sir Mark said that they were beginning to show considerable improvement.

Fire Was Quickly Put Out

A fire broke out in the engine room of the Barber division of the Provincial Paper Mills at Georgetown, recently and threatened other parts of the plant. The blaze was fortunately extinguished in time. Only the roof was damaged before the flames were got under control.

Notes and Jottings of the Industry

T. Havill of the Havill Paper Company, Montreal, and J. B. Brown of the T. B. Little Company wholesale paper dealers, Montreal, were in Toronto last week calling upon the trade.

O. H. Moore, managing director of the Hinde and Dauch Paper Company of Canada, Toronto, and Mrs. Moore, were in Fort Edward, N. Y., last week attending the funeral of R. Vanderwerker, father of Mrs. Moore.

J. M. Finlay, secretary-treasurer of Ritchie & Ramsay, coated paper manufacturers, Toronto, won the novice singles in the Rusholme Lawn Bowling Club and was presented with a handsome trophy at the annual meeting.

R. I. Finlay, of the United Paper Mills, Toronto, who is president of the Canadian Paper Trade Association, is able to be around again after being confined to the house for several days with the grippe.

If You Could Invent Your Idea of a Perfect Doctor

We believe it would closely coincide with the new Vickery Doctor. It has these tremendous advantages over all other doctors:

Automatically maintains blade contact over the full width of the roll or cylinder.

Is entirely self-adjusting.

Is absolutely non-scoring.

Positively eliminates time required by ordinary doctors for fitting, both during the week and on Monday after starting up.

Keeps rolls or cylinders in first class condition.

Avoids trouble and cost of grinding rolls.

Once installed, no further expense is involved beyond an occasional renewal of the blade. Renewal takes but a few minutes and can be done in most cases while the machine runs.

We guarantee that the Vickery Doctor will accomplish these remarkable results in your mill. A 30 days' trial is offered to all responsible mills.

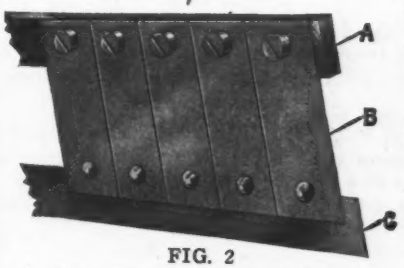


FIG. 2
A. Base Bar which is attached to and forms part of the Doctor support.
B. Spring Fingers. C. The Blade.

BIRD MACHINE COMPANY
SOUTH WALPOLE ~ MASSACHUSETTS

The VICKERY DOCTOR

7293

New York Trade Jottings

C. C. Hockley of the American Lakes Company, Waukegan, Ill., was a visitor in New York city, last week.

* * *

Fire did considerable damage recently to the building and stock of the Gowanus Waste Material Company, Inc., 50-54 Second avenue, Brooklyn.

* * *

Judge Bondy on Tuesday appointed Albert S. Newman receiver of the Select Paper Company, Inc., 219 East 23rd street, which is in bankruptcy.

* * *

The Box Board Association at its meeting held November 17 at the Roosevelt Hotel, was addressed by W. A. Gately of the Division of Simplified Practice.

* * *

W. G. Mitchell, assistant to the president of Price Brothers and Company, Ltd., Kenogami, sailed Saturday with Mrs. Mitchell for a two months' vacation in Europe.

* * *

The Joint Committee on Approved Chemists of the American Paper and Pulp Association recently approved for listing Thomas Linsey Crossley, 28 Lonsdale Road, Toronto.

* * *

A bankruptcy petition against the Select Paper company, Inc., 219 East 23rd street, has been filed by the Brooklyn Standard Bag Company, Inc., for $1,800; the Grand Lake Company, Inc., $4,005 and Alfred Bleyer & Co., $500.

* * *

A bankruptcy petition has been filed by the Service Bag Company, Inc., manufacturing paper bags at Cedarhurst, L. I. Liabilities are given as $121,372 and the assets as $367,103. Judge Garvin appointed Walter S. Gibbs receiver.

* * *

J. P. Heilbronn of the J. P. Heilbronn company, paper dealers of Manila, is in New York city and is making his headquarters at the office of the company, 223 Broadway. Mr. Heilbronn is also a director of the Philippine National Bank.

* * *

A. J. T. Taylor, president of the Combustion Engineering Company of Canada, landed in New York last week, Wednesday, after a several months' trip through Europe studying the steam plant developments particularly in the pulp and paper industry.

* * *

William R. Wisser has organized the Brooklyn Fibre Syndicate, Inc., Decatur street and Irving avenue, Brooklyn, which is manufacturing fibre container board and fibre shipping cases of all kinds. Mr. Wisser is president of the concern and Lewis Nadel is the secretary.

* * *

The Scranton Times has announced plans for a new four story modern building in Scranton, Penn. Davis and Lewis of Scranton have been retained as architects, S. P. Weston of New York on newspaper engineering and plant design, Dwight P. Robinson & Co., Incorporated, New York, on engineering and construction.

* * *

The Salesmen's Association at its weekly luncheon Monday, spent most of its time discussing plans for the annual convention. It was decided to hold two sessions on Tuesday, February 3, the business meeting in the morning and the dinner in the evening. Two nationally known speakers will be secured for the after-dinner program. One will be Edgar A. Guest, the poet, while the other has not yet been announced.

Refuse Burner Discontinued

An illustration is presented herewith of the refuse burner of the Great Southern Lumber Company at Bogalusa, La., which has just been discontinued as this material is now being utilized in the manufacture of paper. The company says:

"We have discontinued the use of this burner after nearly 16 years of service, and all of the refuse formerly going to the burner is now used in the paper mill for fuel and pulp and the burner is no longer used,"

BOGALUSA REFUSE BURNER DISCONTINUED

The following sign is painted on the burner:

B O G A L U S A
Plant of
Great Southern Lumber Company
Refuse Burner
BORN—Oct. 1, 1909
DIED—July 4, 1924

Every day during my life of sixteen years I consumed daily 560 cords of waste material or a total of 2,688,000 cords.

I cost $75,000 but my fire has destroyed $1,344,000 worth of what was formerly considered waste.

The complete utilization of the sawmill refuse in the manufacture of paper has my fire forever extinguished.

H. A. Moses Again Heads Improvement Association

[FROM OUR REGULAR CORRESPONDENT.]

SPRINGFIELD, Mass., December 2, 1924.—Horace A Moses, president and treasurer of the Strathmore Paper Company with mills in Woronoco and Mittineague has been reelected for the 13th year as president of the Hampden County Improvement Association. The nomination was made in spite of the fact that Mr. Moses has desired to retire for several years. Mr. Moses was one of the founders of the League and has been untiring in his efforts to maintain and broaden its activities.

8 Paper Manufacturers Prepare For Better Business

During the past two weeks eight large manufacturers of paper commenced preparations for the better business that is bound to come in 1925. Their preparations will make it possible for them to produce better paper at a greater speed and at a lower cost.

Their paper will from now on be of better formation and of even caliper. Lumps and foam spots will be eliminated and in some cases an increase in production of more than 10% will result. This will be accomplished by the Voith High Pressure Stock Inlets they are installing. Four of these manufacturers already have one of the new Inlets, and are putting in others. Give us an opportunity to prove the above statements.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

Your copy of an illustrated is ready telling of the new stock inlet and of what it will accomplish. Proofs of the above statements are included. Write for it today.

Don't Stand Idle While Others Are Preparing

Obituary

Charles Beck—Miss Hortense P. Beck

PHILADELPHIA, Pa., December 1, 1924.—A dual bereavement came to the business family of the Charles Beck Paper Company, fine paper distributors, 609 Chestnut street, during the past week with the passing of two of its members, Charles Beck, the veteran founder of the company and his daughter, Miss Hortense Beck, Secretary and Treasurer of the firm. Mr. Beck was one of the pioneer paper distributors of the Quaker City and the Nestor of the local jobbing trade, while his daughter, Miss Hortense P. Beck, had achieved prominence in the commercial life of the city as a pioneer business woman. Mr. Beck, who was 87 years of age at the time of his death, died two days after the death of Miss Beck, the latter having died on Thanksgiving Day following a few days illness due to peritonitis. Mr. Beck died suddenly while in the midst of preparations for the funeral of his daughter. He seemed vigorous and active until within a few hours of being stricken with acute edema of the lungs, brought about by grief over the passing of his daughter. Mr. Beck was born in Sullivan County, N. Y., in 1837 and came to Philadelphia more than 60 years ago. In 1864 he established the present Charles Beck Company which last October 10 celebrated the 60th anniversary of its business history. He retired from active participation in its affairs 15 years ago. At the time of his retirement he was President of the company, this executive position passing to his son, Leonidas Beck. On October 10 last he paid a personal visit to the offices in Chestnut street, going over the entire departments of the firm and exchanging greetings with the various executives. His daughter, Miss Hortense Beck, at that time accompanied her father over the building and joined in the good wishes that were lavished on the veteran founder of the company. Besides founding the Beck Paper Company, Mr. Beck was also the organizer of the Beck Machine Company, dealers and manufacturers in paper converting equipment used in the paper box and other trades. Shortly after the Civil War the Beck Company began the importation of German papers for the paper box, toy manufacturing and printing trades.

Miss Hortense Pauline Beck, was born in Germantown, December 31, 1868 and attended private schools in this city. She was one of the first women to become a business executive in this section of the country, having been associated with her father's concern shortly after her graduation from high school. She entered the employ of the company, beginning her business career in a minor capacity and rising to the executive position of Secretary and Treasurer several years later.

Mr. Beck is survived by the following daughters:—Misses Annie S., Augusta M., Bertha E., and Adelle M.; and two sons, Leonidas Beck, head of the present firm and Charles J. Beck, head of the Charles Beck Machine Company.

Dual funeral services were held on Sunday at the family home, 221 E. Logan street, Germantown, Philadelphia.

Henry Wellhouse

ATLANTA, Ga., December 1, 1924.—Henry Wellhouse, president and treasurer of the National Paper Company, and a conspicuous figure in the business life of the South, died Wednesday night at a local hospital, following an illness of two months.

Mr. Wellhouse, who was 66 years of age, was a pioneer Atlantan, moving to this city in 1869 from Rochester, N. Y., where he was born in 1858. Throughout his successful and varied business career he has been actively identified with civic and philanthropic movements and was responsible in great measure for a number of forward strides for the betterment of the community in which he lived.

Receiving his early education in Atlanta before the days of public schools, he was a member of the Pioneer Schoolboys' organization, and interested in all its undertakings. A close personal friend of the late Albert Steiner, he was senior trustee of that estate and was actively identified with the building and equipping of the Albert Steiner Ward at Grady Hospital.

At the age of 16 Mr. Wellhouse entered the paper business with his father, who organized the company then known as the Wellhouse & Sons Company, at Pryor and Alabama streets, which later became the National Paper Company. In the company's infancy Mr. Wellhouse was his own salesmanager and sales force, traveling every state in the Southeast.

Prominent in the social and fraternal life of the city, he was a member of organizations and clubs, including the Ingleside Country Club and the Standard Club.

Besides his widow, he leaves a son, Sidney Wellhouse; two brothers, Alvin and Louis Wellhouse, of Atlanta, and two sisters, Mrs. Max Young and Mrs. Boerne Young, both of New York.

Roy C. Holmes

Roy C. Holmes, aged 45 years, associated for the past four years with the sales department of the Eastern Division of the Kimberly-Clark Company of Neenah, Wis., died November 13 from complications following an operation for appendicitis. His headquarters were at 51 Chambers street, New York.

His work has brought him into close touch with many of the more prominent Eastern newspapers and magazine publishers, by whom he was regarded as a splendid type of gentleman and a most careful and efficient business executive, and who all, with his co-workers, deeply regret his untimely passing.

Mr. Holmes leaves a widow and two children and several brothers and sisters.

The funeral services were from his late residence, Haskell, N. J., and the interment took place in Chicago, December 4.

Mrs. Frank J. French

KALAMAZOO, Mich., November 29, 1924.—Mrs. Frank J. French, Niles, Mich., wife of the president of the French Paper Company, died Friday, Nov. 21, at the Battle Creek Sanitarium of heart attack. She was prominent in the club work and social life of her town. Mrs. French was 60 years of age.

DEMAND IN PHILADELPHIA

(*Continued from page 32*)

shipment to this country. The new 1925 greeting card and announcement stocks will be ready for distribution shortly after the New Year. Manager Warwick C. Miller of the Philadelphia offices will at that time introduce a complete line of French and English papers and cards and envelope assortments.

New Notes of the Trade

Col. Charles L. Carter, Philadelphia representative of the MacAndrews and Forbes Company of Camden, N. J., who has been on a two weeks' bird hunting trip in Ontario, Va., will return to his office in the Simmons Building, this week.

President John H. Sinex, of the Garrett-Buchanan Company, who for the past three months has been at his summer home in Maine recuperating from an illness, is again at his desk much improved in health.

Parchment Community Meeting

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., November 29, 1924.—Charles A. Blaney of the State Industrial Board will be the speaker for the Parchment Community meeting, which is scheduled to be held Wednesday evening, Dec. 10, in the community house. His talk will be on "State Penal Institutions". Harry L. Hurlbert, warden of the Jackson prison, has been invited to attend and will talk on some of his experiences in prison work.

Established 1886

Winter Shipments

The buyer in need of expeditious service will find our facilities equal to any emergency, especially during the winter season with its numerous contingencies due to weather conditions.

Our pulp resources are being constantly amplified by large shipments in transit and regular deliveries from open European ports. It will pay you to see General Headquarters for Bleached and Unbleached Sulphite, Kraft and Ground Wood.

M. GOTTESMAN & COMPANY

—INCORPORATED—

18 East 41st Street
New York, N. Y.
U. S. A.

European Offices:
Stureplan 13,
Stockholm, Sweden.

PROGRAM FOR COST CONVENTION

The following is the complete program for the twelfth semi-annual convention of the cost association of the Paper Industry to be held Wednesday, Thursday and Friday, December 10, 11 and 12, at the Hotel Commodore, New York.:

Wednesday, December 10, 1924

MORNING SESSION

9-10 A. M.—Registration.

10 A. M.—Opening Address by President James A. Reilly.

10:30 A. M.—"Fixed Assets."

A suggested classification of accounts for these Assets will be drawn up and forms distributed, showing how depreciation and repairs, etc., should be dealt with in connection with these Assets, both for cost and tax purposes.

Address—by L. H. Olson, Vice-President, American Appraisal Company.

12:30 P. M.—Luncheon will be served in Grill Room.

AFTERNOON SESSION

2:00 P. M.—"Raw Materials."

A thorough discussion of the problems met with in getting correct costs of the various raw materials, used in paper making will take place.

Speakers—

H. L. Dinsmore—Miller, Franklin, Basset & Company.

A. W. Astley—Chemical Paper Manufacturing Co.

4:00 P. M.—"Measuring Men."

Speaker—S. F. Fannon, Director of Public Service, Sherman Service, Inc.

Thursday, December 11, 1924

MORNING SESSION

9:30 A. M.—"The Labor Problem."

Speakers—J. P. Jordan, Industrial Engineer New York City, Ex-President, National Association of Cost Accountants.

Adam Wilkinson, Labor Commissioner, American Writing Paper Company.

General Discussion.

11:30 A. M.—"The Value of Organized Effort."

Dr. Hugh P. Baker, Executive Secretary, American Paper and Pulp Association.

12:30 P. M.—Luncheon will be served in Grill Room.

AFTERNOON SESSION

2:00 P. M.—"Budgetary Control in a Paper Mill."

Speaker—E. B. Gray, Assistant Auditor, S. D. Warren Company.

General Discussion.

3:30 P. M.—Business Session.

Secretary-Treasurer's Report.

Election of Officers.

Program of Work for 1925.

6:00-8:00 P. M.—Banquet and Music.

Friday, December 12, 1924

MORNING SESSION

9:30 A. M.—"Steam and White Water Losses."

Speakers—W. G. MacNaughton, Secy.-Treas., Technical Association of the Pulp & Paper Industry.

G. D. Bearce, Vice-Chairman, Committee on Waste.

G. A. Ware, Asst. Secy., Newsprint Service Bureau.

General Discussion.

12:30 P. M.—Luncheon will be served in Grill Room.

AFTERNOON SESSION

2:00 P. M.—"The Analysis of Statistics."

Speaker—John H. Graff, Research Department, Brown Company, Berlin, N. H.

Discussion.

3:30 P. M.—"Our Statistical Charts."

Speaker—Stanley Byron, Statistician, Hammermill Paper Company.

Sessions will be started promptly at times stated and all meetings will be held in the Mezzanine Parlor.

Weaver Roofing Co. Erects New Warehouse

The Weaver Roof Company of Los Angeles, Cal. manufacturers of asphaltic treated roofing papers, has just completed an expansion program which included the construction of a warehouse and general offices.

The structure is a one-story brick building and covers approximately 11,500 square feet of floor space. It was erected at a cost of $20,000 and is situated in the down town manufacturing district.

The manufacturing plant of the concern, covering five acres, and

NEW WAREHOUSE OF WEAVER ROOF CO.

located in the southeastern section of Los Angeles, has a daily production of 4,500 rolls of roofing paper. Distribution of the concern's products until recently, has been confined to Southern California and surrounding territory. At present the system of distribution is being enlarged; under the new plan various sections of the Pacific Coast and other states will be supplied with Weaver Roof Company products.

Sylvester L. Weaver is president of the concern.

PAPER SECURITIES IN MONTREAL

(*Continued from page* 31)

wood, at least 3,000 men for 100 days would be required, to say nothing of the teamsters, steamboat employees, barge loaders, etc., required for each year's operations. The proposed plant will cost $5,000,000, all to be expanded in three years. At least 150 tons of news print per day will be exported. This is equal to 45,000 tons per year. At present market prices this means that over $3,000,000 of outside money will come into the province each year. As it was on my application this berth is now being offered for sale, I desire to lay the facts briefly before the public of Manitoba, and I would ask you to give this letter the publicity which the importance of the industry to Manitoba deserves."

An Aid to Wire Life!

The Beloit Suction Box Oscillator

Keeps Covers Smooth
Improves Guiding of Wire
Saves Wire Edges
Saves Wear on Guide
Makes More Paper Per Wire

Beloit Iron Works — **Beloit, Wis., U.S.A.**

Established — Since 1858

PAPER, AN INDEX OF CIVILIZATION*

By Howard H. Reynolds, Sales Manager of the B. D. Rising Paper Co., and Former President of the Salesmen's Association

Considering uses of paper, it is interesting to review the history of paper in our own country, to see the growing diversification of uses, to consider the uses of products closely related to paper and to forecast the future of paper, bearing in mind that paper is not only an index of civilization but also a prime factor in making civilization possible.

In this country the history of paper is the history of the country. At the time of the Revolutionary War, there was not enough paper to be had to wad the guns of the soldiers or write the orders for the officers. There was practically no paper. By 1810 the use had increased to about one pound per capita per year. By 1850 it had grown to between eight and nine pounds; in 1869 it had grown to twenty-five pounds, (an increase due to the Civil War); in 1899 to fifty-seven pounds; in 1923 to one hundred fifty pounds. The nation now consumes more than its own weight in paper every year.

At this rate, the use and manufacture of paper in 1950 will reach over three hundred pounds per capita for every man, woman and child, or a pound for every working day.

Since 1875 the United States has been the greatest manufacturer of paper and our country the greatest market for paper in the world. As we lead the world in corn, cotton, telephones, automobiles and railroads, so we lead the world in paper. We manufacture and consume more than all the rest of the world put together. We ourselves use more than fifty-six per cent of the world's product.

Typical American Industry

Paper is a typical American industry and paper manufacturers are peculiarly typical Americans. Out of the first little Rittenhouse mill in Philadelphia in 1690 they have developed what is perhaps the most essential industry we have, as all other industries depend upon it. Here is the line of development.

At the close of the Revolution in 1783 there had grown up eightly or ninety little "hand-made" mills, all man-power affairs. In 1825 along came the first important development, the Fourdrinier machine, and "power production" followed. By 1850 most of the paper was machine made.

Power was the first radical advance. The second came in 1869 when wood first came in largely as a paper-making material. That year we produced three hundred sixty-nine thousand tons. In the next thirty years, that is, by 1899, we had reached the astounding amount of over two million tons a year. From that time on growth went by leaps and bounds, till in 1923 we made and used about seven million, two hundred thousand tons, out of a world production of fourteen million tons, and this does not include the large amounts of paper imported from foreign lands.

This is the gain, from three thousand tons in 1810 to more than seven million tons in 1923; otherwise stated, from about one pound per capita in 1810 to one hundred fifty pounds in 1923. This gain shows the history of the country, a gain that does hand in hand with the winning of the West, the building of the railroads and the emergence of the United States in 1918 as the greatest, most solid and most liberal country in the world. This is significant because paper not only grew with our country, but was one great cause why we grew. We could not have grown as we did from an agricultural to the most highly organized country in the world without letters, invoices, paper money, checks, notes, books of record, newspapers, advertising, and all of the machinery of commerce that depends upon paper. We are a great, highly-organized, educated community, because of paper and we could not be such a community without paper.

Foreign Use of Paper

The use of paper by several foreign nations as given in the Government reports of 1920, tells its own story. These figures represent pounds per capita per year.

Russia	13
Japan	16
Norway	33
Germany	45
Great Britain	75
United States	150

Otherwise stated we use twice as much per capita as England, three times as much as Germany, and twelve times as much as Russia. Without paper we would be as illiterate as Russia and as backward as the Ethiopians of Senagambia.

Having seen our pre-eminent position in the matter of quantity, let us now see what are the principal kinds of paper used and the proportion of each. Here are the figures for 1923, based on the best available reports of production. (Consumption is somewhat larger than production, including considerable importations, particularly of news and kraft papers.)

Boards	31.2 per cent
News	20.9 per cent
Book	14.9 per cent
Wrapping	14.0 per cent
Felts and Building	5.7 per cent
Fine (writing)	5.0 per cent
Tissue	2.5 per cent
Hanging	1.2 per cent
All other	4.3 per cent
	99.7 per cent

In value, the relative positions of the different grades would be altered giving higher positions to the finer papers.

In pounds per capita in the same year (1923), we made the following:

Board	40 pounds
News	27 pounds
Book	19 pounds
Wrapping	18 pounds
Felts and Building	7 pounds
Fine (writing)	6 pounds
Tissue	3 pounds
Hanging	1½ pounds
All Other	5 pounds
	126 pounds

Department of Agriculture reports make consumption for 1923, including imports, some twenty per cent, larger or about one hundred fifty pounds per capita.

Between 1899 and 1923 the gross production of all grades increased 3.3 times. By grades it was as follows:

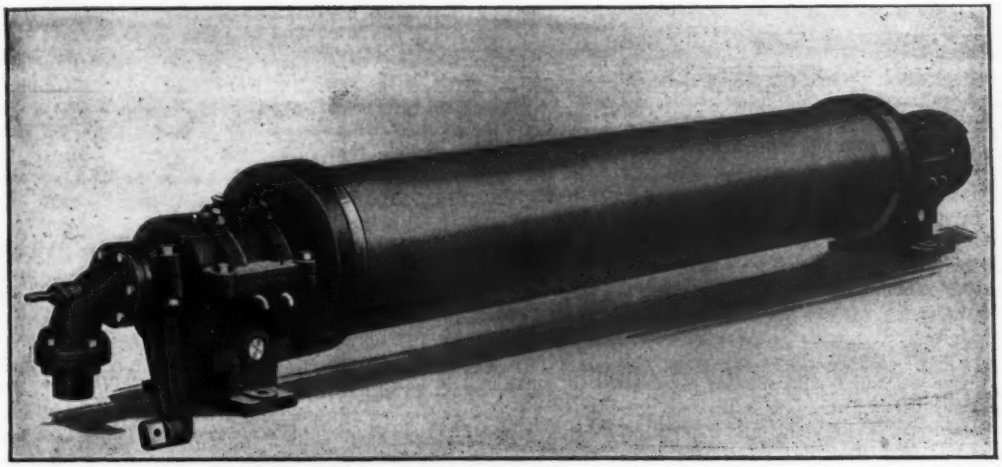
Tissue	6-1/2 times
Board	5-7/10 times
Felts and Building	4-3/10 times
Book	3-1/2 times
Fine (writing)	3-2/10 times
News	2-6/10 times
Wrapping	1-8/10 times
Hanging	1-6/10 times
All other	4-3/10 times

In other words, tissue, boards, felts and building, and book paper, grew faster than the average; also, paper for miscellaneous uses included under "all others."

Fine papers, news, wrapping and hanging grew less rapidly but

*Delivered before the Salesmen's Association of the Paper Industry, New York Division, October 27, 1924.

Kilberry SUCTION ROLL



Patents applied for

Common-sense bearings about one-half diameter of shell. Infallible alignment of suction box to shell, no adjustments required. No wear on packings, therefore no replacements required. Direct jaw clutch connection to driving shaft, no gears. Less power to drive roll.

Coupon

Downingtown Mfg. Co., (Green St. Plant)
East Downingtown, Pa.

( ) Send information on Kilberry Suction Roll.
( ) Send your complete catalog of Paper Mill Machinery.
(Check item desired, no obligation.)

Company .....

Personal Name .....Title .....

Address .....

all showed a substantial increase. This table shows that while all grades have gained there has been a shifting in the demands of the market.

Specialized Paper Products

Aside from the staple grades named previously, there is an enormous variety of specialized paper products and products related to paper. We mention a few:

Paper drinking cups, paper towels, paper bandages for hospitals and sanitary uses, cellucotton (paper batting like cotton batting used by barber shops and others) paper milk bottles, paper oyster cans, paper cans for Dutch Cleanser and similar cleansing products, parchment paper for butter, bacon, hams, etc., greaseproof paper for similar uses, cellophane (transparent paper for wrapping candy and other box goods) paper for electrical insulation, filter paper, fibre boards for trunks and suitcases (paper run through thirty per cent solution of zinc chloride and subjected to hydraulic pressure, hard, horny and durable, Leather-board, wall-board felt paper for linoleum backing (this has brought a great development in the use of linoleum), Balsam wool (a cellulose batting between sheets of paper for house insulation against cold), sheathing paper, roofing paper, paper shingles, carpet paper, waterproof paper for use between rows of crops to prevent weeds, paper twine, paper rope, plaited paper cord to replace rattan in wicker furniture, paper rungs, paper cloth, paper shoes, paper hose, paper shirts, paper collars, paper handkerchiefs, paper napkins, (the last six items were developed in Germany for war use. They answered the purpose, but lacked durability to stand repeated washing) papier mache, paper for carving and panelling furniture and woodwork paper burlap for sacks, paper matting for suitcase instead of rattan, paper sausage skins (more sanitary than animal sausage skins) paper plates, carbon paper.

These are a few and only a few of many special uses of paper which are growing daily. There is a fertile field for the development of new uses.

There are many aunts, uncles, and cousins and other relatives of paper. Cellulose, the basis of paper, is chemically $C_6 H_{10} O_5$ the same constituents and in the same proportions as those of starch, but in different physical form. Add one molecule of water (H_2O) and you have glucose of grapesugar, $C_6 H_{12} O_6$. Fermint distil it and you have alcohol. It is perfectly possible for a chemist to convert his morning paper into grape sugar, into alcohol, and then get drunk on it.

Chemically Cellulose

All cotton, linen and silk is chemically cellulose. Mercerizing cotton is analogous to parchmentizing paper. The cotton is passed through a solution of thirty per cent caustic soda and held taut until dry. It has a silk-like brilliance but is stronger. Artificial silk is made from mercerized cotton. Mercerized cotton dissolved with carbon disulphide and squirted through minute holes falling into acidulated water forms into threads of artificial silk and is ready to be spun. Germany exported six million dollars worth of artificial silk in 1913.

Celluloid is another cellulose product. Cotton is nitrated and mixed with camphor gum and forms material for moving picture films, toilet articles, etc. Gun-cotton, smokeless powder, and dynamite are nitrated cellulose products.

Collodion (nitrated cotton dissolved in ether and alcohol) is used as liquid court plaster. Nobel, winner of the peace prize, one day covered a cut on his finger with collodion. Incidentally he discovered that by mixing collodion with nitro-glycerine the product set into a jelly. This jelly was so insensitive to shock that it could be safely transported or fired from a cannon. He called it "blasting gelatine." It was the first of the "high explosives" that have been the chief factor in modern warfare.

If, instead of treating cotton with nitric acid, we treat it with strong acetic acid we get a substance similar in appearance to celluloid but much less inflammable. Moving picture films can be made of cellulose acetate without danger of fire. It is used for automobile goggles, gas masks, automobile windows, and transparent coverings for index cards. Airplane wings made of cellulose acetate at a little height are practically invisible.

Cellulose dissolved in cupro-ammoniacal solution is spread on a cylinder on which is engraved a lace pattern; the excess is scraped off and the cylinder turned into a solution that sets the paste-like cellulose and hardens it. When it comes off, it forms a complete piece of lace without separate threads; it is more durable and can be made into designs infinitely more complex and beautiful than thread lace.

Collodion spread on cloth forms an excellent substitute for leather in bookbinding or upholstery. Shoes can be made the soles of synthetic rubber, the upper of canvas coated with cellulose solution. Very presentable collars are made of linen water-proofed with cellulose solution.

Use of Paper in the Arts

Enough has perhaps been said to indicate the important uses of paper in the arts. By far and away the most important use of paper, however, is in supplementing and enlarging the memory of the race, for records are merely memory, enlarged, made exact and permanent. Without records, a discovery fades in the wind even of its discoverer or in transmission to others is made worthless through inacuracy. If the Pythagorean theorem or the Pasteur diptheria serum had been discovered ten thousand years ago, they would have been lost, because there was no adequate medium of record. With paper, a discovery or invention is made permanent. With plenty of paper the world knows of it next day, and in a month or three months a hundred men are working to perfect it. Paper, by submitting the discovery of one man to the rest, enables an idea to be carried to completion and perfection. It harnesses the minds of all men to work out the problems of all. The intellect of no one man, however great, is as great as the intellectual force of all combined. With paper we can start our work where Socrates or Edison or Marconi left off; otherwise we start at "ignorance" and struggle as individuals rather futilely and get only a little way.

Because through lack of paper, discoveries had to be rediscovered by every generation, previous ages developed slowly. They were like the frog that climbed three feet in the well every day and slipped back three feet at night—they didn't get anywhere because they forgot what they learned. How full the Old Testament is of the phrase "they forgotten God" and how easy it was, without books!

Literature, poetry, religion, science, only developed when it was possible to record and transmit them. Without paper literature is folklore; poetry, sons of bards; religion, tradition; science, astrology or necromancy.

Dependent Upon Paper

Without paper money, commerce could not be transacted because it would be impracticable to transport the quantities of metal required. Checks, credit through books of accounts, all banking, insurance, Government loans, financing of corporations through stocks and bonds, almost every form of co-operative effort would cease; it would not be possible to feed, clothe, equip or transport an army without paper for plans orders and requisitions.

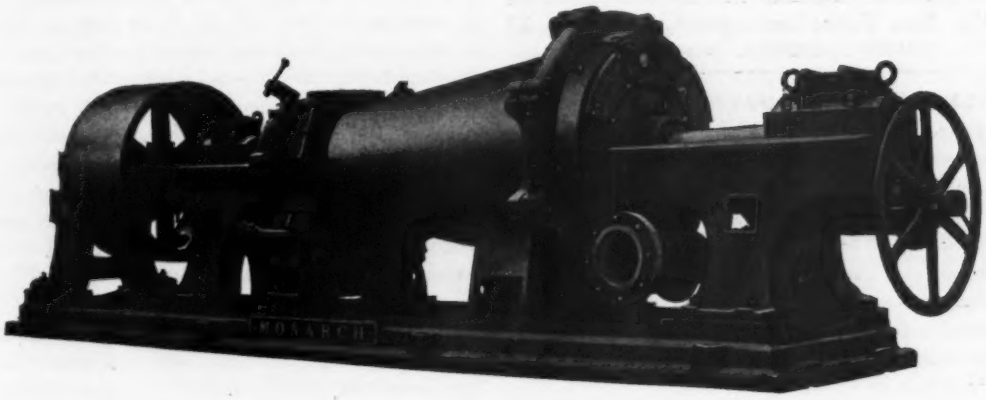
Without paper, law could not be promulgated or enforced. Without paper, courts would be little tyrannies—"governments of men and not of laws."

Consider the absurdity of medicine built on a materia medica without paper and a chemistry carried on with no guide but memory!

Without paper there could be no fixed body of human knowledge. Without paper institutions of learning, as we know them, would evaporate into thin air.

In a generation from the day paper should disappear, commerce, would be back in the days of barter; medicine an example of

(*Continued on page* 70)



LET your Jordan engine problems be our problems. For over thirty years we have been pioneers in the manufacture and installation of Jordan engines and our experience in this line is at your service.

The demands on us for Jordan engines suited to particular and peculiar conditions has led us into the design of many special Jordans with all manner of special equipment so that, today, we offer six different sizes of Jordans in two general types, besides many special machines. All of our machines may be driven by belt or by motor direct connected.

The equipment of our Jordans embraces all the regular and special types so that any condition can be met with the proper tackle.

The Precision Jordan, with its fine bearings and thousandth of an inch plug adjustment, is the finest machine of its kind and is a distinct Noble & Wood achievement.

We have many anti-friction bearing Jordans in satisfactory operation today, and have built more Jordans with bearings of this character than any other manufacturer.

The Bull Dog Jordan is another distinct Noble & Wood product. For roofing and all felt stocks, the power and labor costs are materially reduced by its use.

From the small laboratory Jordan to the largest commercial size no detail has been omitted to make the service given by our Jordans the most efficient, and the operation the easiest.

Of course, we have an axe to grind—we want to sell you Jordan engines. But that does not stand in the way of our giving you a fair and unbiased opinion based on our experience when you put your problems before us. The policy of this company is fairness—and—more value for your money than found in any other machinery.

The Noble & Wood Machine Co., **HOOSICK FALLS, N. Y., U. S. A.**

Canadian Builders: **PORT ARTHUR SHIPBUILDING CO., Ltd., Port Arthur, Ont.**

Editorial

Vol. LXXIX New York, December 4, 1924 No. 23
HENRY J. BERGER, Editor

FIGHTING TRADE MARK PIRACY

Trade mark piracy in New York is not the popular pursuit it used to be before the institution of the Commercial Frauds Court. One of the reasons was revealed recently when Magistrate George W. Simpson reported that his court had a record of ninety-eight per cent of convictions. The magistrate also let it be known that the results obtained were due to the excellent team work of Assistant District Attorney Max Salomon, who has been specially assigned to these business fraud cases, and the American Fair Trade League, which has appeared as complainant in a number of cases and also assisted other complainants by collecting evidence.

Magistrate Simpson said he believed in the gospel of a second chance and was ready to give defendants the benefit of every reasonable doubt, and that for this reason he had permitted the withdrawal of many prosecutions where the defendants although plainly guilty promised to sin no more. "The District Attorney and the American Fair Trade League are prosecuting, not persecuting," was the phrase he used.

The Court's remarks were called forth by a case in which a local manufacturer of silk shirts was charged by the League with fraudulent use of the TRUHU trade mark of the Jersey Silk Mills. The defendant admitted his guilt, pleading extenuating circumstances, and upon his promise not to repeat the offense the complaint was withdrawn. Magistrate Simpson's statement follows:

"The People are prosecuting through the District Attorney of the County of New York in a proceeding before me as upon a summons for a violation of section 2354 of the penal Law. The prosecution has been instituted and aided by a public spirited organization known as The American Fair Trade League, which has in the past done yeoman service in this Court in the prosecution of those who are defrauding the Public by misbranding, falsely making or counterfeiting trade marks and in other ways violating the law.

"There is a confession hereby counsel for the defendant that he did receive silk and it was labeled with the trade mark 'Truhu' which is a valuable trade mark apparently, and that this defendant had no right so to do. I have the assurance of defendant's counsel upon the record that he realizes his mistake and that there will be no recurrence of this violation.

"The District Attorney and the American Fair Trade League are prosecuting—not persecuting—but the merchants of this community who offend against the law might as well understand that these prosecutions are in the public interest and will be followed to the limit both in this Court and in the Court of Special Sessions. We have a record here of 98 per cent of convictions in this court since the court was established and I do not hesitate to say that it is because the facts are thoroughly investigated by such organizations as The American Fair Trade League and by the District Attorney's Office and ably prosecuted, and it ought to be notice to the men in this community who are violating the law that they cannot do it and get away with it. On the other hand, if in good faith and through mistake a man has offended for the first time and openly confesses his error and promises that there will be no recurrence, and if there is no objection, why, I believe in the gospel of a second chance for that merchant, and for this defendant if those are the facts and the People have no objection to the prosecution being withdrawn and the American Fair Trade League, at whose instance the prosecution was instituted in the interest of the general public, has no objection. I will therefore permit the summons to be marked 'withdrawn', which means merely that it is withdrawn, today and the prosecution can be renewed. It is withdrawn without prejudice. The prosecution have not completed their testimony before me and it is withdrawn without prejudice to the District Attorney of the County of New York prosecuting at any subsequent time for a violation by this defendant."

IMPORTS AND EXPORTS INCREASE

Imports and exports of paper were both greater during October than during the preceding month. The latter reached the highest level attained so far this year, according to the Paper Division of the Department of Commerce. An outstanding feature is the generally lower prices ruling compared with October of last year, both in the import and export trade, the increases registered in the volume of shipments in a majority of the items showing a proportionately greater gain in the values. Discussing exports in detail the Paper Division says:

Exports during October were valued at $2,359,486. This sum represents an increase of 8 per cent over the August exports, which heretofore held the record for 1924, and 11 per cent over the October, 1923, exports. On a quantity basis the result would be even more encouraging, since the majority of the items show a generally lower average in values than those for the corresponding month last year.

A notable exception is news print paper exports, the volume of which exceeded the shipments during October, 1923, by 49 per cent, while the value of the shipments show an increase of 52 per cent. Other classes of paper in which export prices appear to have advanced are: kraft wrapping, cigarette paper and books, carbon paper, envelopes, cover paper, greaseproof paper, tissue and crepe paper, bristols, hanging paper, and photographic paper.

Imports of paper and paper products into the United States during October were practically the same as those during the same month last year and exceeded those of September, 1924, by 8 per cent. The slight declines in the October receipts as compared with those of a year ago was largely the result of reduced imports of news print paper, which represents approximately 86 per cent of the total paper imports, and also smaller receipts of wrapping paper, which represented over 25 per cent of the remaining imports last year.

Imports of paper base stocks during October increased 4 per cent as compared with September, and 40 per cent compared with October, 1923. Increased receipts were registered in practically all classes, the only exception being imports of waste, which fell off slightly. Sweden benefited chiefly by the larger demand this year, having furnished 40 per cent of the sulphite pulp and 53 per cent of the kraft pulp compared with only 25 per cent and 11 per cent respectively, last year.

Imports of pulpwood reached a total of 122,324 cords, valued at $1,241,771, an increase of 6 per cent, both in quantity and value as compared with October, 1923.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 3, 1924.—The Government Printing Office will receive bids on December 8 for 35,700 lbs. (350 reams) of 21 x 31—102 buff wood bristol board. Bids will be received on the same date for 3,000 lbs. of 22 x 28—196 orange railroad board.

The Government Printing Office will receive bids on December 10 for 5,000 sheets of 26 x 38—50 lined strawboard.

The Printing Office has received the following bids for 50,000 3⅛ x 5½ rope manila envelopes: U. S. Envelope Company, $1.01 per M; Union Envelope Company, $1.30; R. P. Andrews Paper Company, $1.12; Hershey Envelope Company, $1.85 and $2.15.

The following bids have also been received for 5,000 9½ x 12 kraft envelopes: U. S. Envelope Company, $8.85 per M; Union Envelope Company, $5.16; R. P. Andrews Paper Company, $11.75; Sewell-Clapp Envelope Company, $13.71.

The Printing Office has also received the following bids for 36,000 lbs. No. 2 quality, 25 x 30—No. 30 binders board: C. L. LaBoiteaux Company, $65 per ton; Twin Falls Binders Board Mills, $63; Whitaker Paper Company, $62.86; Barton, Duer & Koch, $63.15; Mathers-Lamm Paper Company, $63.90; Dobler and Mudge, $69; Kerr Paper Mills Company, $68; Old Dominion Paper Company, $77.20; C. B. Hewitt & Bros, $71; Holliston Mills, $69; and Philip Rudolph & Sons, $77.50.

The Government Printing Office will receive bids on December 5 for 2,400 pounds (100 reams) of 12 x 22—24 fine white glazed bond paper. Bids will also be received on the same date for 2,400 pounds of 33 x 34—96, No. 32 parchment deed paper.

The Government Printing Office has received the following bids for 25,000 pounds of 19 x 24—38, white M. F. lithograph paper: Virginia Pulp and Paper Company, at 7.58 cents per pound; American Writing Paper Company, at 10 cents; R. P. Andrews Paper Company, at 6.59 cents; Mathers-Lamm Paper Company, at 8.25 cents; Whitaker Paper Company, at 7.13 cents; Lindemeyr & Harker, at 9.48 cents; Bryant Paper Company, at 7.5 cents; and Maurice O'Meara Company, at 6.94 cents.

The Printing Office also received the following bids for 36,000 pounds of 25 x 30—25, No. 2 quality binders board: C. L. LaBoiteaux Company, at $65.00 per ton; Whitaker Paper Company, at $62.91; Dobler & Mudge, at $69.00; Old Dominion Paper Company, at $78.98; Philip Rudolph & Son, Inc., at $77.50; Twin Falls Binders Board Mills, Inc., at $63.00; Barton, Duer & Koch Paper Company, at $63.15; C. B. Hewitt & Bros., Inc., at $71.00; Holliston Mills, Inc., at $69.00; and Maurice O'Meara Company, at $88.00.

The Government Printing Office has received the following bids for 4,350 pounds of 21 x 32—15½ No. 8 onion skinned paper: Whitaker Paper Company, 24.97 cents per pound; R. P. Andrews Paper Company, 23.7 cents; Barton, Duer and Koch Paper Company, 23.72 cents; Mathers-Lamm Paper Company, 27. cents; Old Dominion Paper Company, 23.99 cents; Dobler and Mudge, 24 cents; American Writing Paper Company, 29.5 cents; Steiner Paper Corporation, 24.5 cents.

The Printing Office has also received the following bids for 35,700 pounds of 21 x 31—102 wood bristol board and for 40,000 pounds of wood mellon bristol board in 20 inch rolls:

Whitaker Paper Company, 4.81 cents per pound; Mathers-Lamm Paper Company, 5.25 cents; R. P. Andrews Paper Company, 4.94 cents; and Reese & Reese 4.975 cents, and 4.925 cents.

Reese & Reese have been awarded the contract by the Government Printing Office for furnishing 9,000 pounds of 24 x 36 red rope paper at 9.845 cents per pound, bids for which were received on November 3.

The Whitaker Paper Company will furnish 36,000 pounds of green wood bristol board in 20 inch rolls at 4.87 cents per pound; and the District of Columbia Paper Manufacturing Company will furnish 10,000 pounds (100 reams) 19 x 24—100 buff, desk blotting paper at 8.19 cents per pound. Bids for these items were received on November 10.

The Whitaker Paper Company will furnish 36,000 (12,960 sheets) of No. 2 25 x 30—No. 18 binders board at 3.16 cents per pound and the Aetna Paper Company will furnish 4,950 pounds (150 reams) of 28 x 34—33 white writing paper at 16.97 cents per pound. Bids for these items were received on November 14.

Paper Mill Construction by the Austin Co.

The Robert Gair Company, main offices at 350 Madison avenue, New York City, has awarded a contract for a new warehouse to The Austin Company, industrial engineers and builders, 217 Broadway, New York. Karl A. Lefron, 171 Madison avenue, New York City, is consulting engineer.

The new paper storage warehouse will add another unit to the main plant unit at Piermont, N. Y. The building is to be 120 feet wide by 280 feet long, with two 64-foot spans, clearance to the under side of truss 40 feet. Crane runways will be installed for 10-ton cranes.

The builders have agreed to complete the Robert Gair Company warehouse in ten weeks time. Contruction and all material purchases handled through the Philadelphia Office of The Austin Company.

The Austin Company is also building a new unit for the Bogota Paper and Board Company, at Bogota, N. J.

Another project by the Austin Company is for the Federal Paper Board Company, Bogota, N. J. Karl A. Lefron, 171 Madison avenue, New York City, is consulting engineer. This is a new filtration plant about 60 feet square.

The Flintkote Company, East Rutherford, N. J., manufacturers of roofing material, is building a new experimental laboratory. The Austin Company, 217 Broadway, New York, are the engineers and builders. The building is of one story steel frame construction. The Philadelphia office of the builder will handle the construction and all material purchases.

Crown Filler to Be Sold Direct

Announcement has been made that after January 1, 1925, The Solvay Process Company will handle all sales of Crown Filler through its Sales Department, Wing & Evans, Inc.

Crown Filler has been manufactured continuously by The Solvay Process Company for over twenty-five years, and has been supplied as a filler for the paper trade through Dexter & Bowles.

Crown Filler is being used extensively in the manufacture of the higher grades of paper both in the United States and Canada.

Deliveries are made in carload lots from the Detroit, Michigan Plant of The Solvay Process Company. All sales after January 1, 1925, will be handled through the main office of the Company, located at 40 Rector street, New York City.

J. H. Kaiser is the special representative of The Solvay Process Company for promoting and handling the sales of Crown Filler to the paper trade.

S. W. Webb Speaks at Last Meeting

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., December 2, 1924.—President S. W. Webb of the Eastern Manufacturing Company of Bangor, Me., spoke before the November meeting of the Connecticut Valley Branch of the Cost Association of the Paper Industry at the Hotel Nonotuck last week Monday night. His subject was "What the Executive Expects of the Cost Man."

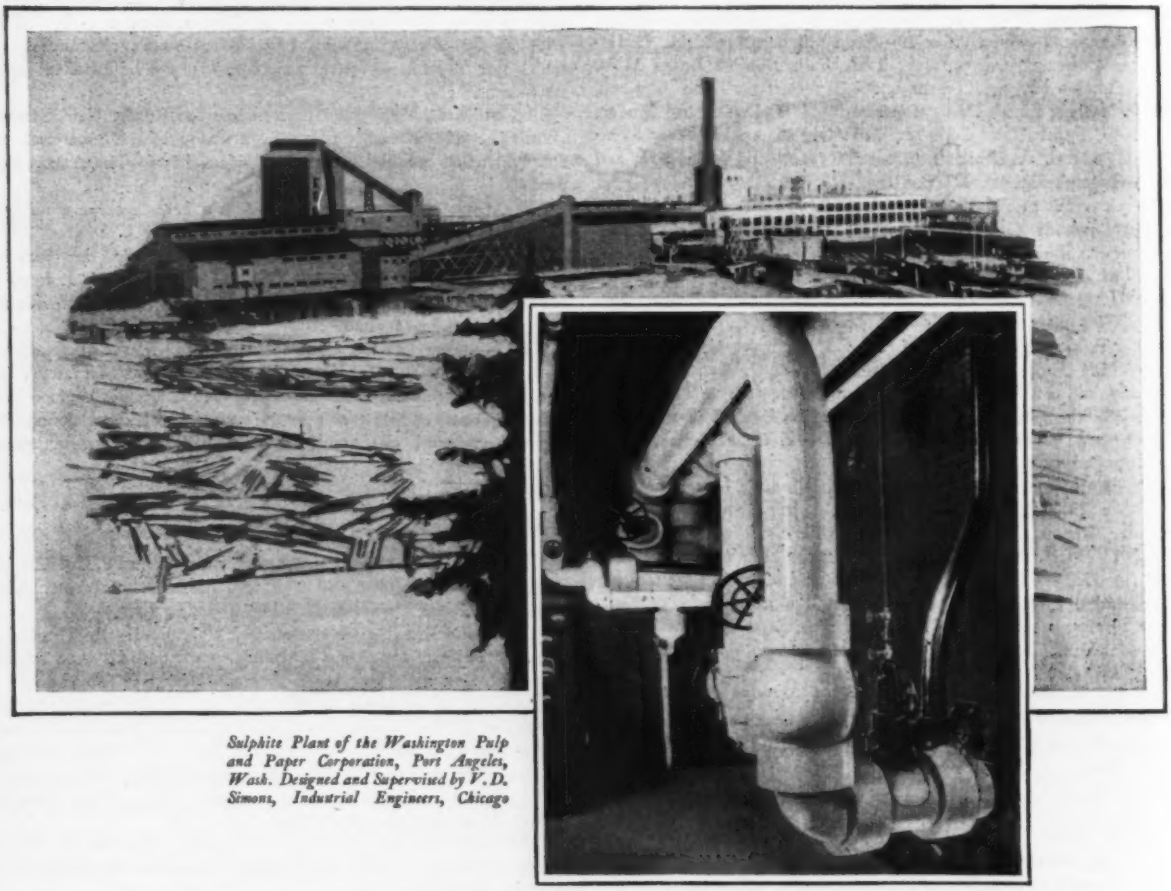
Henry J. Guild, vice president of the same concern also spoke and a discussion followed.

Complete confidence in a name made it easy to decide on suitable piping for this paper mill

When the Washington Pulp and Paper Corporation had plans made for the latest extension of their power plant, they faced new piping problems. Boiler pressures and super-heat temperatures were proposed which were much higher than any they had been operating under in the past.

The recommendation of Crane steel piping materials by the consulting engineers, the V. D. Simons organization, was well founded on broad experience in many Simons-designed plants. And it was accepted with double assurance, because the Washington Pulp and Paper Corporation had used many other Crane piping materials in the past.

From their own experience they had learned to depend on any valve, fitting, pipe bend and steam specialty which bears the Crane name.



Sulphite Plant of the Washington Pulp and Paper Corporation, Port Angeles, Wash. Designed and Supervised by V. D. Simons, Industrial Engineers, Chicago

CRANE

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO
CRANE LIMITED: CRANE BUILDING, 386 BEAVER HALL SQUARE, MONTREAL

Branches and Sales Offices in One Hundred and Forty-eight Cities
National Exhibit Rooms: Chicago, New York, Atlantic City, San Francisco and Montreal
Works: Chicago, Bridgeport, Birmingham, Chattanooga, Trenton and Montreal

CRANE EXPORT CORPORATION: NEW YORK, SAN FRANCISCO, SHANGHAI, CHINA
CRANE-BENNETT, LTD., LONDON
CIE CRANE: PARIS, NANTES, BRUSSELS

Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W. G. MacNAUGHTON, Secretary

WHITE WATER LOSSES AND STREAM POLLUTION

One of the sessions of the Fall Meeting of the Technical Association held in Buffalo, October 14 and 15, 1924, was devoted to the work of the Waste Committee. Robert B. Wolf, chairman of the Committee, presided. The discussion follows:—

Chairman Wolf: To start the discussion I have been informed that Mr. Rue, who is on the Waste Committee, has done some work in connection with the matter of a code which can be used in connection with each mill, so that the mills themselves can talk about the same things when they are talking about white water losses. If Mr. Rue is here I would ask him to open the discussion.

J. D. Rue: Mr. Chairman and Gentlemen: The work of the past two or three years on white water studies has been designed primarily to show what the losses are, something of their nature and something of what can be made of them. We have felt from our viewpoint at the Laboratory that to effectively accomplish better savings of fiber through white water recovery it was necessary for the mills to get a continuous report of their conditions and very desirable for mills operating under like conditions and on similar products to exchange information regarding the efficiency of their individual methods of operation, saveall method, recirculating of white water, etc. For that reason the Laboratory has offered to act as the collector and distributor of information on the same general principal that your Secretary announced this morning, that he who draws, antes. That is, we have formulated a tentative code for the reporting of white water saveall performance and we hope to get the support of several book mills in one group, perhaps several news mills, and board mills so by each mill reporting from month to month their performance to tabulate the results and redistribute the tabulated data to those mills that have reported.

Of course, the final findings that result over a period of time will be available for general distribution but the confidential information submitted from month to month is not to be published.

Saveall Performance Code

COMPANY ..... MILL .....
Period covered by report.....

1. Saveall No.....Type.....Maker.....
2. Inside dimensions—
   Length .....Width.....Depth.....
   Diameter .....Height of (conical section pyramidal) .....Total height.....
3. Mechanical means for moving sediment.....
   Type and spacing of arms.....Speed.....
4. Paper machines served by saveall—

	No.....	No.....	No.....	No.....
Maker				
Trim				
Speed:				
Maximum				
Minimum				
Average				

5. Basis weight of paper—
   Maximum .....
   Minimum .....
   Average .....
6. Daily production during period—
   Maximum .....
   Minimum .....
   Average .....
7. Total furnish for period (pounds)—
   Rag .....
   Sulphite .....
   Soda .....
   Converted paper .....
   Groundwood .....
   Mineral loading .....
   Rosin size .....
   Other sizing material.....
   Alum .....
8. Duration of shut-downs on paper machines per 24 hours—
   Minimum .....
   Maximum .....
   Average .....
9. Total production for the period—
   .....
10. Consistency of stock in paper machine stuff chest (per cent)—
    Maximum .....
    Minimum .....
    Average .....
11. Consistency of stock at apron (per cent)—
    Maximum .....
    Minimum .....
    Average .....
12. Average ash content of paper during period $= \frac{\text{Sum of ash} \times \text{tonnage of each grade}}{\text{Total tonnage}}$
    .....
13. Remarks .....
14. Number of showers used on paper machine and screens—
    Continuously .....
    Intermittently .....
15. Volume of fresh water used in showers per 24 hours—
    .....
16. Volume of saveall water used in showers per 24 hours—
    .....
17. Fresh water supply—
    Source .....
18. Analysis of water—
    Combustible solids .....
    Non-combustible solids .....
    Complete analysis if available.....
19. Saveall data.
20. Volume of white water running to saveall per 24 hours—
    Maximum..... Minimum..... Average.....
    Remarks .....

TECHNICAL SECTION, PAGE 201

21. Total fiber and filler per 1,000 gallons running to saveall—
Maximum..... Minimum..... Average.....
22. Filler found in above per 1,000 gallons—
Maximum..... Minimum..... Average.....
23. Volume of water running to waste per 24 hours—
Maximum..... Minimum..... Average.....
24. Fiber and filler per 1,000 gallons running to waste—
Maximum..... Minimum..... Average.....
25. Filler found in above per 1,000 gallons—
Maximum..... Minimum..... Average.....
26. Soluble solids found in above per 1,000 gallons—
Maximum..... Minimum..... Average.....
27. Weight of fiber and filler furnished (oven dry basis).....
28. Weight of paper manufactured (oven dry basis).....
29. Weight of fiber and filler in water run to waste.....
30. Material unaccounted for.....Pounds.....Per cent.....
31. $\frac{\text{Weight of paper manufactured}}{\text{Weight of fiber and filler furnished}} = \text{.....Per cent}$
32. General remarks .....

Mr. Wells of the Laboratory who has charge of this work was due here today to present this subject himself and to discuss with you the code as he has at present formulated it and submit it for your criticism and further suggestions.

The point particularly that I want to make now is to appeal to the various mills to come in with us and make this thing a success. We will do the hard work of co-ordinating, tabulating and distributing and as far as our funds and opportunities permit of assisting in collecting the data.

The Saveall Performance Code looks rather formidable. It consists of three mimeographed sheets bringing together the type of saveall equipment, the nature of the product, the operation of the machine in terms of efficiency, production, etc., and then various data regarding the consistency of the stock before and after the saveall operation, all designed to bring it down to an efficiency basis. The object of the code is to get the information in a comparable form so that the information from one mill can be compared with another. It is hoped that in this way enough information can be obtained by the mills of what their fellow manufacturers are doing to act as an incentive for more careful operation themselves and that it will result perhaps as an inducement to greater effectiveness and efficiency on the part of others.

Fiber Loss in White Water and Shrinkage

Secretary MacNaughton: In the paper mills generally each mill has a figure for shrinkage which is the standard for that mill. Some mills consider if they get 100 pounds of paper from 105 pounds of stock, it is good; other mills figure 110 per cent, others 115, some 120, still others 125. If the percentage of shrinkage does not depart materially from that standard figure there is no concern. In other words, if the figure is 120 per cent, no questions are asked if it is not higher, but if the furnish on production goes up to 127 or 128 there are questions asked. Generally speaking the explanation is, "There undoubtedly was an error in the inventory of the paper made or pulp used and it will all come back the next month or the month after."

There are very few mills, none that I know, that know accurately what the actual loss is, how much stock and mechanically suspended material is carried away in the white water, nor to my knowledege are there many mills that know how much effluent there is. If the owner of the mill or some one else goes into the mill and sees the flow of effluent out of the sewer he may ask, "How much stock is in that white water?" Generally the reply is, "I must confess I don't know but I don't think there is very much because when you dip up a pail of it you do not see anything." Nevertheless the shrinkage in that mill may be 20 per cent, may be 10 or 5 per cent.

Suppose a mill is making 100 tons a day and there is an actual loss in the 5 per cent shrinkage. Now 5 per cent of 100 tons is 5 tons. And the lowest value of material we may say that is worth $25, may be $30. If it is a high grade mill and high grade material like book paper or fine stock it may go to $100, so I will say from $25 to $100. Five tons is then $125 to $500 a day, and multiply that by 310 days and we arrive at a figure that almost any one would be willing to take the value of it if he could get it.

Generally speaking if you put it that way the owners of the mills are ready to say that they are willing to spend at least 50 per cent of the value of the material to recover the other half.

I am glad to see that there is a tendency towards what I would consider an accurate determination of the quantity of material getting away. We have given some thought to this question for quite a while and I am convinced that in order to determine what loss of material there is you must know the volume of the effluent from the mill and the quantity of material per thousand gallons in it in order to compute the tonnage of material actually going out.

You know if your bookkeeper took the book records of the business being done and didn't count the cash to check the figures he would not be considered a very good bookkeeper. If he said, "There are my figures; the figures are all right bcause I am a good mathematician. The cash may be off, but the figures are right."

I think that is something that can be carefully considered by men who are thinking about white water losses. Instead of trying to find out by book figures what the loss is, the only thing to do is to go into the sewer and find it.

H. A. Morrison: In line with what the secretary has said it seems to me in order to count the cash the way it should be approached would be if possible to get an exact line on the wood used and the moisture. It that can be done then everybody knows how much paper they make and naturally the difference between inventory at both ends of the process would give you your losses. I know it is extremely difficult to determine the solid content of white water, and it seems to me that possibly going at it from the other angle, at the beginning of the process, knowing the amount of raw material used and against that the actual amount of paper produced would give possibly a more definite and direct line on what was being lost.

Of course, in making chemical pulp it seems to me that it would be of great advantage to know both the weight and moisture content of the wood cooked. In making ground wood perhaps those are of less importance so far as making pulp is concerned, but it strikes me that the advantage of knowing exactly the quantity of raw material used would bring home this point of the real value of white water losses. It is practically always of great moment.

Control at Abitibi Paper Company

R. W. Hovey: I think outside of knowing the amount of losses, you will have the other side of the feature to face, especially from the viewpoint of control. It might be very interesting to know at the end of the month you have lost 10 or 20 per cent, but in a large mill you can lose a lot of money from day to day if you don't know what is happening at the time. We keep a very close tab of our wastes. And a bad wire, an open valve, leaky deckle straps, those things will run very easily in a large mill to $25,000 or $30,000 a year.

If we are wasting money we are very glad to know the facts but we are able to save a lot of money by knowing about it as soon as the trouble starts. If any large mill would go to the bottom of their waste all over the mill they would find they would save a lot of money in plugging leaks that are perfectly obvious if you only knew they were going on.

Chairman Wolf: I am going to take the liberty of asking Mr. Hovey if he won't give us some rather specific information as to how you do that.

R. W. Hovey: I am perfectly willingly to give any information we have, but it is not very complicated. You have to know the consistency of your effluent and where it comes from.

In our particular case the effluent in the main sewer from the entire mill is metered which is a simple thing to do over a weir. Then we have weirs at all different parts of the mill by which we measure different losses. The main sewer weir must balance every 24 hours with the other different weirs. We establish a daily balance of the big weir against all the smaller weirs so that we not only know how much the total waste is but we know exactly where it

comes from. Knowing where it comes from enables us to stop it soon after anything serious happens.

For instance in the case of a blow pit a plank may break out or a tile go but we know in a half hour when it has happened and we have the thing plugged up. That can run into a lot of money very easily.

If an operator washing out the tanks leaves a valve open, by half past ten Monday morning we have all the valves shut. That happens quite often.

It is nothing but a system of weirs, depending on how far you want to go.

Allen Abrams: What I ask specifically is how do you determine your white water loss?

R. W. Hovey: We simply determine our total losses. As a matter of fact, we balance against our wood input. We know the unit per cord of wood going in so far as our bookkeeping is concerned. We balance our pulp against our wood.

All we know is where the losses come from. We can examine these losses and determine their value as a product, and if the installation isn't too much, try to recover them. We have to recognize a certain loss based on that value of the product.

Allen Abrams: I may not have made myself clear. How do you test the effluent? For example, do you take samples and pour them through a 60 mesh wire to determine the fiber?

R. W. Hovey: No, we filter through filter paper which gives us the total loss, if we want to know about the value of the effluent we examine it further.

Losses in Grinding Wood

Allen Abrams: We have just completed some pulp wood tests that I think are interesting in that respect. We used a car of wood on each test and there were about a dozen tests. We checked the quantity of wood used and determined every loss from beginning to end, so that on the average we could account for 95 per cent of the wood with which we started. We found that from 7 to 12 per cent of the wood passes away from the wet machine in the white water. This included fiber which is retained on a filter paper and also substances dissolved in the white water. The latter amount to from 2 to 3 per cent.

Now the matter of determining the value of the stock in the white water has always bothered us. It is difficult to say how much of this is good recoverable pulp, unless you take the experience of a great many mills who have investigated it thoroughly. Undoubtedly a certain percentage of this fiber has value at least as a filler. We would be interested to know the experience of other mills. Let us assume that it is fiber that has passed through a 60 mesh wire.

Chairman Wolf: This may answer part of your question. A test that I am familiar with and have made at different times indicates about a two per cent loss from the collars of the ordinary ground wood wet machine which would account for 2 per cent of your total of the 6 which would be about one-third of the total loss.

I wonder if Mr. Fagan is in the room?

J. P. V. Fagan: Our work is carried on essentially as Mr. Hovey has described. We try to balance up the different sewers against our main sewer. And if I remember correctly what didn't pass through a 100 mesh wire was considered as stock that was available to be used again. I think the whole scheme was based on a 100 mesh wire. It worked out very well and cut down the losses materially.

Chairman Wolf: I might add to what Mr. Fagan has said, that in 1906 we were losing at Berlin something like 10 to 12 tons a day of fiber, so much so that the International Paper Company below could not run their water screens without having deposits of pulp on them. That was reduced through the laboratory department to an average of 250 pounds a day for the entire mill with 400 tons production.

T. L. Crossley: I wonder if the members realize what a very fine condition some of this pulp is in? I can quote you some figures which I think were included in some tests reported at the last annual meeting of the Canadian Association. They are just sieve tests. Through a 200 mesh sieve with ordinary ground wood pulp, one third went through.

It seems to me the problem of the industry is to save, or prevent the formation of, a lot of that stock that will go through a 200 mesh sieve. Of course, that was shaking it through the sieve, but it gives some idea what a large proportion of the stock is not recoverable at all under our ordinary saveall system. Seventeen per cent of sulphite pulp went through a 200 mesh sieve.

Those figures are from a reliable source. I think the work was done at Price Brothers. I don't know about the sulphite, but the ground wood was quoted in the figures at the last Canadian annual meeting. The stock was 325 freeness and 22 per cent of that went through a 200 mesh sieve.

R. W. Hovey: I don't think you can call that flour. You can get half of it through a 200 mesh sieve if you want to. When you look at it through a microscope you will see that it is composed of nice long fibers which go through end on.

As far as screening goes, we have tried that out very thoroughly and we can get anywhere from 1 to 25 per cent through a 200 mesh sieve if we want to, but the stuff that goes through isn't by any means white water.

T. L. Crossley: The white water that goes to the savealls is a very light consistency, and most of our savealls are not much finer screen than about 80 mesh, so there is a possibility of not being able to recover much of our flour stock or fine fibers that get through.

R. W. Hovey: I think your whole problem in recovery of flour is this. In a news mill a lot of fresh water is used and the machine operator will use all he can. If you don't keep track of him you will have your effluent over 200 tons of water per ton of product. In our mill it runs 150 and 175 tons of effluent per ton of product every 24 hours. If we have a little trouble, it will be 185 or 190 tons over night.

You are putting in fresh water and with that water you have to take out stock. One important part of our control system is keeping down the amount of fresh water used, for an hour or two, but have them cut it off as soon as possible. They certainly can cut the effluent down to 10 or 15 per cent in an hour or two if they want to do so. Where you have fresh water you have to carry out the effluent and this carries stock.

In our experience, if you get to too low a limit you begin to have slime troubles. We never yet have had any system where we could run 24 hours a day, six days a week, without having it slimed up, but we run pretty close to it.

Value of Bentonite in Preventing Slime

J. D. Rue: I want to offer a little contribution from our experiences in one mill where we were attempting to cut out the white water losses by closing up the system. Pitch troubles followed this closing up of the system. Whether this was a case of cause and effect we are not able to say. In any case the application of Bentonite in the beaters and on the grinders effective in reducing the pitch troubles. Mr. Well's paper on Bentonite* for the reduction of pitch troubles gives a detailed report of these experiences. The problem throughout the efforts to close up the system was largely psychological. To convince the men that more fresh water was used than was necessary was a greater fight than the technical difficulties. When the pitch troubles were encountered after the mill had been run for two years the natural thing for the men to do was to go back to fresh water and to take the losses which the increased waste of white water entailed. The use of Bentonite, however, made possible the partial closing of the system and a consequent daily saving of over 5 tons of furnish in a production of 80 tons of paper.

Proper Use of White Water

Secretary MacNaughton: I would say so far as a news print mill is concerned or a wrapping paper mill the proper outlet for the effluent is as wash water through the blow pits.

*Paper Trade Journal, Oct. 16, 1924.

I know a great many mills are separated into pulp mill and paper mill. The pulp mill uses fresh water to wash its pulp in the blow pits and in the bleach tanks. The paper mill uses fresh water on the paper machine and wastes the effluent which could very well and in a good many mills is transferred to the chemical pulp mill to do the washing which is not only saving fresh water but is also saving the material. That is where in an integral mill a certain amount of the effluent can be used where it is best applied and when used, it is so polluted it can't be used elsewhere.

The difficulties that have been spoken of in regard to grinding, of course, should not apply to mills that use chemical pulp only and perhaps clay.

The conclusion of Mr. Hovey's it seems to me is a very logical one, that if the cost of pumping fresh water is little above that of pumping white water from the level of the basement of the mill, then it is probable that the most logical way is to take all the material out of the white water and let it go to waste with the soluble material Mr. Rue has spoken of. But if a mill is so situated that it has to pump its fresh water for the mill from a level thirty or forty feet below the basement of the mill, then the cost of pumping the fresh water should be taken into account.

Most news print mills are built today I understand with a provision for 50,000 gallons of fresh water per ton of paper made. Some book mills use as much as that. I remember in last year's report of the White Water Committee where two book mills located within a very few miles of each other were found, one of them, to be using 14,000 gallons per ton of paper made and the other one, its close neighbor, was using 28,000 gallons. There was no logical reason why one should use twice as much as the other. And more than likely I will venture to say that the mill that was using twice as much fresh water having twice as much effluent was losing twice as much material as the other.

Fresh Water Requirements Discussed

President Taylor: About three weeks ago I received a letter from a gentleman who was evidently writing a chapter on the use of water in pulp and paper mills, and he asked me if I could give him figures on the amount of water used in different mills for different processes. He stated he had written to a number of the mills and had received many replies, but the figures given varied to such an extent that he could place no dependence upon them.

I replied giving him figures that we call our standards, but told him that he had better not put them up to other parties as such, as they might not agree at all, for there really are no standard amounts in as far as I have found. I think the standard for a mill is in a great part what they have available. If they have a volume of fresh water they use it, and if not they use much less with about the same final result.

I wanted to ask Mr. Wolf if the Committee has considered in their work the question of the reuse of white water and if so in what quantities. It would seem to me the first principle of saving, inasfar as white water is concerned is to use as much of it as you can and send as little as possible to savealls, whether mechanical or stationary. Some mills use white water over and over again, and go right along day after day adding but a small quantity of fresh water to keep up the system. Others mills manufacturing the same product will say they cannot use white water because they cannot keep the sheet clean. There are many ways in which white water can be used and I think the problem is to find the amount of water that is required under normal conditions and then how much of it can be white water without endangering the quality.

The amount must of course vary with the grade of paper made and the condition of the water, but there should be some standard set as to how much water is required and what portion of it can be white water.

Chairman Wolf: I will say that the hope of the Committee is this work which the Forest Products Laboratory is proposing to do, will be the beginning of the formation of those standards, just as in the News Print Service Bureau certain standards have been adopted. I think that is the only way it can be done.

Recovery of Clay

John Traquair: I'd like to say a word regarding some of the book mills; the problem of recovery of fiber and the problem of recovery of clay are distinct. We happen to be situated where all our water supply comes from wells. The water first goes through condensers which gives us then a large supply of what is now relatively waste water. In our mill, the inclination is to use this fresh, warm water rather lavishly for every purpose around the paper machines.

I remember on taking up the subject of waste, we went into it from the point of view of recovery of fiber only. We made a test on wire pit water, and were astonished to find that we were losing nearly 1,000 pounds a day of dry fiber. We are now preventing that loss. It is relatively easy where you are using book stock to recover fiber, but it is not so easy to recover filler.

I will add this, the loss of fiber through a screen is occasionally larger than you think. We have made some very careful experiments with soda pulp to find what the loss would be after three washings through an ordinary decker, and were surprised when we found that it was nearly 10 per cent.

The main problem is the recovery of the clay and the very fine fiber from the saveall water. If you filter it on filter paper it will show 30 per cent fiber and 70 per cent clay.

What I really am after is to find some way of dealing with the waste from our old paper plant where we de-ink 30 to 40 tons per day of old magazine stock. It contains, of course, all the ink and clay from the waste paper. We are after some means of recovering it in a way that we can use it again. That is really a very difficult proposition. You can recover fiber relatively easily. There are a number of savealls on the market that will recover stock with a good efficiency, but when you come to recover water containing only a very small, perhaps four to five pounds per 1,000 gallons of solid matter of which only one-third is fiber, you have to go into some settlement proposition, and then you find your material is not clean.

I hope that this Committee will be able to throw a little light on how to handle that difficult proposition.

Sedimentation Savealls

G. D. Bearce: Mr. Traquair has mentioned the conical settling tank. Two years ago the Waste Committee, in cooperation with some of the paper mills, made some tests on the settling tank type of saveall and Mr. Gephart of the Miami Paper Company would be the best man to talk about it as he carried on those experiments.

The layout is one tank for each machine, with an inside sheet iron cone. All the material goes down to the bottom of the tank where the rich stock is pumped out and goes back into the mixing box of each machine. Of course the remainder wells up through and gradually goes over the side of the tank to the sewer. In this way there is a continuous supply of rich stock going to the paper machine. The stock has sufficient time to practically settle, with the help of the clay which is a great medium for settling stock. They get practically clear water out of the top of the conical savealls. I believe in some tests they ran up to 97 or 98 per cent efficiency. They get that not only in tests but continuously. I think Mr. Gephart can verify the figures although he said they do not run tests on it all the time.

I believe there is another type with three settling pans that gives more or less the same result.

There appear to be three distinct problems in this white water saveall problem outside of the amount of water that you use per ton of paper. The point Mr. Taylor brought up regarding standardizing on any certain number of gallons per ton of paper is quite true. However, the Committee found that in the neighborhood of 15,000 gallons should be easily obtained, and in a good many cases it should be lowered to about 10,000 gallons. That would give the

proper run-off to take away necessary waste water and at the same time reuse all the white water in every possible way.

There are three classes of white water water waste in the various paper mills. The long fibered stock is relatively easy to save over the the inclined screen or almost any screen saveall; the second type is a mixture of long and short fiber, and the third, the very fine stock such as newsprint in which the fiber is very short and difficult to reclaim.

A number of the mills have tried various settling systems on news grade white water with a certain degree of success. If there is no clay it is somewhat difficult but if clay is used the fiber easily settles. The settling tank system seems to be the equipment that will take out the last squeak in the white water problem after all possible fiber has been reclaimed by screen savealls. It is only a question of how far it is practical to go in trying to take out that last bit of very short fiber. An average figure for stock loss in a news mill is 6 to 8 per cent. It would seem reasonable that this figure ought to be cut nearly in half and still operate very successfully.

John Traquair: I want to go a step further in the purification of paper mill effluent such as containing clay and a small quantity of fiber from the point of view of stream pollution, because there is no question but that in a very short time some mills will be called upon to purify their effluent or make it at least very much cleaner than it has been. I know of course in some particular mills that is not a question. We know there are certain percipitants that can be used and I would like to get all the particulars on that subject I can from other people's experiences, because some day, possibly ten years hence, we may get to where we have to do something.

Chairman Wolf: I think that is the best argument that has been advanced so far.

G. D. Bearce: I understand that the International Paper Company has tried out the Dorr saveall at a number of its plants.

M. C. Fleming: The figures that have been given to me by the International Paper Company are that they clarified it to from 0.554 to 0.005 per cent. That would be approximately 0.4 to 0.5 pounds per 1,000 gallons.

H. A. Morrison: This might be of interest to Mr. Traquair. In connection with the recovery of filler and fiber from stock, that is effluent water containing considerable filler and some fiber together with ink, one of the mills in Wisconsin called it to my attention once and thought perhaps it might be a problem for our Company. I quickly discovered it was not anything we could solve, but it was suggested to me and the slight amount of work that was done at that time was extremely promising. And that was to take it this way: Take the effluent water and put it through a continuous thickener of the Dorr type. You then get a repetition of the washing and it is suggested to carry that through two or three separations with intermediate agitation. And so far as that work was carried it was indicated it could be worked out satisfactorily, and a fairly high recovery made of clean clay and clean fiber. I just give that as a suggestion.

Chairman Wolf: Mr. Fleming have you had that in operation in the straight news mill anywhere?

M. C. Fleming: No, although I believe it has operated for perhaps a three or four months period while they were making news print.

Chairman Wolf: No result on that?

M. C. Fleming: Approximately the same, a little higher however than when there is some filler in it. If there is filler in it I think they would get a clarity of 0.004 per cent. If it was straight news print it would be 0.006 per cent.

G. D. Bearce: I presume it is a small paper machine that they are using your saveall on. When we talk about modern news mills it means 100 ton paper machines and that means a enormous saveall equipment.

I wonder if you have figured out the size of the machine that it would require for a new hundred ton machine using 15,000 to 20,000 gallons of water per ton of paper?

M. C. Fleming: We have done some figuring with mills. One mill making about 100 tons a day figured out they would probably need a 30 foot machine, and they have figured they have close to 2,000,000 gallons a day. Another mill where they have about 1,000,000 gallons I think it would need about a 24 foot machine. As a matter of fact, we put one in to handle a 1,000,000 gallons a day.

Stream Pollution and the State of Ohio

R. S. Hatch: We in Ohio are confronted with a problem that should be of interest to all mills and which I think will gradually spread all over the country. That is the question of stream pollution. The State Board of Health of Ohio has at the request of certain residents on the Miami River, issued an order compelling the city of Dayton to put in a sewage disposal plant and stop discharging sewage into the Miami River. Previous to this order, the city of Dayton had a firm of engineers investigate all the sewage effluent from Dayton and vicinity, and particularly the effluent from the Aetna Paper Company and the Peerless Paper Company. When this firm of engineers made their recommendation to the city to put in a disposal plant they said that it would be a matter of great expense to the city if they were to include the effluent from the two paper mills. For the city alone it would cost about $2,000,000 and if they took in the two paper companies it would run about $4,000,000. Consequently, when the state proceeded against the city of Dayton they also proceeded against the Peerless Paper Company and the Aetna Paper Company as separate parties to the proceedings.

The state and the engineers who made the investigation do not accuse the paper mills of direct pollution. In other words, the fiber in itself as discharged into the stream is not of itself a polluting material, but is a contributory polluting material. In other words, it has certain objectionable oxygen consuming properties and if any sewage disposal plant is constructed it must be constructed large enough to take care of fibrous material and would consequently greatly increase the cost. So the two paper mills mentioned must put in means of removing all of the fibrous material from the water before discharging it into the river. If the organic material is removed there is no objection to discharging the effluent into the Miami River and we would therefore no longer be a polluting agency.

Chairman Wolf: Does that include clay, too?

R. S. Hatch: They mention the clay, but they say that clay in itself is not a polluting material. There is plenty of it in the Ohio River and the Miami River. I can perhaps give you some figures that might be of interest. We have been keeping very careful records of our discharge. Our entire discharge from the mill passes over two weirs and we keep records of the discharge, the total amounting to approximately 950,000 gallons per day. We are discharging into the river from about 5,000 to 8,000 pounds of solid material per day, and it will run approximately 50 per cent clay. It varies somewhat, depending on the character of paper we are making.

At the Aetna Paper Company where they use practically no filler, of course, their discharge is almost entirely fiber.

Both companies are given until August 31, 1926 to install saveall systems to remove all polluting material from the discharge that goes into the Miami River.

Now I understand that this is only the beginning of a campaign which will cover the whole state of Ohio, and once an action like this becomes spread about, other states are going to follow and it is going to be a very difficult thing for any paper mill to prove that they are not polluting a stream.

I think the best way out of it is for most paper mills to stop pollution purely from an economic viewpoint, because there is no question but with the proper kind of saveall equipment practically all fibrous material can be removed, and where a filler is used it can be removed and saved.

We are installing Dorr savealls at the Peerless Paper Company. The ordinary conical type of saveall would without doubt in our case have been perfectly satisfactory, but it happens we have a limited

space for installation and we have to install these savealls inside of our plant and on the third floor above the basement. The load was altogether too great without the expenditure of a large amount of money for proper supports. We found that we could get just as high an efficiency with the Dorr and a much lighter load on the floors than with the conical type. So we are installing 15 foot Dorr savealls, one for each machine.

Chairman Wolf: Does any one know anything about those save-alls that have been put into Kalamazoo recently?

The State of Michigan

F. C. Clark: Only in a very general way. It is called the Allied Saveall, a long rectangular tank. I think Mr. Hayward, general manager of Kalamazoo Vegetable Parchment Paper Co. has probably the largest one of any in the city. I can't give you the figures except in a very rough way. It is about 150 feet long and I should say 20 or 25 feet wide and about 8 or 10 feet deep. It has scrapers on chains that runs very slowly as a draw scraping on the bottom, and it scrapes off any material that settles out and is carried down to the pumps and pumped to the machine. They have not as yet as far as I know determined definitely how it should be handled. They have had some difficulty in the formation of slime. Of course, there is a tremendous volume of water there and its circulation is very slow.

I remember a number of years ago in one of the mills of the International Paper Company where we had a somewhat similar tank on a very much smaller scale, we were continually troubled with slime and when it wasn't cleaned once every four or five months we had a great deal of trouble. We usually had a lot of slime troubles before we would go in and clean out the accumulation.

The Allied Saveall

I am not able to give you any definite figures as to how those savealls are working in Kalamazoo. They are still somewhat experimental. There is a good deal of agitation in Kalamazoo along the same line as Mr. Hatch has pointed out as happening in Ohio, only in Kalamazoo we have a little different proposition.

The State of Michigan passed a law about a year ago saying that no stream may be polluted. In other words, we are all breaking the law at the present time. That applies not only to pulp and paper mills but industrial plants of all kinds, as well as cities. A group of men in Kalamazoo have gotten together with a consulting engineer and are making a study of the situation and their preliminary examination shows anywhere from around 2½ tons per million gallons up to in some cases around 8 or 9 tons in some of the big board mills.

Our water is pretty hard and the feeling is as expressed by Mr. Hatch, if we could develop a real pulp saving device it would mean a material cutting down in the amount of fresh water we are using and that of course would cut down our cost of pumping. We are using in the neighborhood of 75,000 to 80,000 gallons per ton in the Hawthorne Paper Company.

There was one other point brought out by Mr. Taylor a few minutes ago about the lack of standards in regard to the amount of white water. I recall some several years ago where a number of mills were studied as to water supply from the standpoint of the amount of water used per ton of paper. There were four mills in particular that were very interesting, two of them using largely rag as their raw material and the two others were book mills. One of the rag mills was low in water consumption and one of the book mills was high. As I recall the figures they were around 13,000 up to 35,000 gallons per ton, showing the absolute lack of agreement in such a set of figures. If all of the mills would get down to the figures set by Mr. Bearce of around 15,000 gallons per ton it would mean cutting down the amount of water pumped I think on the average of around 30,000 gallons.

I am sure Miss McGrath could contribute something that would be of a great deal of interest to our Association.

The Value of Boothal Coagulant

L. E. McGrath: I had occasion about a month ago to make parallel tests on two conical pulp saver tanks handling treated and untreated white water. However as you said Mr. Fleming would be prejudiced so am I.

The mill at which the tanks were located was a two machine book mill, with a production from 26 to 28 tons per day. The furnish for the paper consisted of sulphite, soda, de-inked stock and considerable clay. One machine was equipped with a 16 foot cone bottom pulp saver tank. A Booth dry feeder added Boothal continuously to the white water before it entered this tank. The other machine was equipped with a similar tank in which plain sedimentation was practiced. We received word from the company that they were experiencing considerable trouble with dirt and slime from the uncoagulated water. They asked us to undertake an investigation of the matter. I had been doing some work in taking photographs of slime under the microscope and I used this method to discover the source of trouble.

I found that in using Boothal you coagulate all of the fine fibers, the so-called "flour" and the organic content of the white water and in so doing this you take away any potential slime. Continuously removing these in the thickened stock from the bottom of the tank not only purifies the system but also keeps it clean. In the uncoagulated white water the fine fibers have a tendency to accumulate in the system and act as nucleii for slime spots.

By quantitative tests we also found that the Boothal treated white water contained less soluble organic matter than the uncoagulated white water as some of the fiber decays and passes into solution, the organic matter increases. By the coagulation and the removal of the fiber from the white water there is no opportunity for this to occur.

I also found that the tank which was handling coagulated white water could be cleaned out very easily. In the tank handling untreated white water the fibers had a tendency to stick to the side of the tank and decay. Small pieces of the decayed matter would break away and find its way to the paper.

I think that the above are about the most important things found in actual practice and for which we have actual proof. I have several photomicrographs here if anybody would care to look at them—showing that you do get more slime in uncoagulated white water than you do in coagulated white water.

John Traquair: I think Miss McGrath is correct, that the cause of slime is decomposition of fiber. We heartily agree with that. We have taken up this matter ourselves in a rather different way because we have very hard water containing about 400 parts per million total hardness. Our waste paper stock was the cause of a certain amount of frothing on the machines, which would disappear if we acidified the waste paper slush. This was done by actual trial. When we came to calculate the acid required, we found it was going to run into more than a tank car a week, owing to our hard alkaline water. That compelled us to go into the matter from an entirely different angle.

Land Claims of L. L. Brown Paper Co. Settled

[FROM OUR REGULAR CORRESPONDENT.]

ADAMS, Mass., December 2, 1924.—Judge Charles Thornton Davis of Boston has handed down his decisions in the Land Court, settling disputes over land rights in this town between the L. L. Brown Paper Company and the Renfrew Manufacturing Company, and between A. J. Boothman and the same company and between Willow street residents and the same company.

The L. L. Brown Paper Company which sought to register rights to all lands and waterways claimed by the company was granted its contentions in two cases, one being that the boundary line between the paper company and the Jacquard mill of the Renfrew Company was correct, and that the boundary along the Hoosic River was correct. In regards to the Boothman controversy Judge Davis ruled that the paper company had no easement on land to which the respondent claimed full title on a deed issued to him in 1893.

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

CLARENCE J. WEST, CHAIRMAN

Alkaline Processes

Pulp Cooking Liquor and Process of Making Same. J. E. Plumstead, assignor to Jessup & Moore Paper Co. U. S. pats. 1,488,829 and 1,488,830, Apr. 1, 1924. Sodium carbonate is made to react with a mixture containing lime and sulphur-containing calcium salts (made by passing a mixture of calcium carbonate and sulphur through a lime kiln), and the resulting mixture of caustic soda and sodium thiosulphate or sodium sulphite is used, after separating the insoluble matter, for the preparation of a cooking liquor for the manufacture of pulp. The black liquor from the digester may be evaporated and incinerated to recover the sodium carbonate, and the calcium carbonate sludge may be mixed with sulphur and reconverted into lime and sulphur-containing salts. No. 1,488,829 covers the process, and No. 1,488,430 the product.—A. P.-C.

Circulating System in Alkaline Cooking Processes. Cellulose et Papiers. Fr. pat. 569,492. *Mon. Papeterie Française* 25, 226-228 (May 15, 1924). A cylindrical sleeve, open at both ends, is placed in the digester with its axis coincident with that of the digester, and a suitable circulating device, for instance, an Archimedes' screw or a propeller, is placed at the top of the sleeve. The annular space between the two and the space at the top and at the bottom are so proportioned as to ensure proper circulation of the liquor and grass, which is started up when the material has been softened to such a degree that the level of the liquor in the central portion and in the annular space will be practically the same. It is claimed that the material to be pulped is subjected to a rubbing action which breaks up and disintegrates any lumps which might have a tendency to form if the liquor alone were circulated, and which would prevent proper cooking. A further merit is that all the advantages derived by the use of rotary digesters are obtained. —A. P.-C.

Manufacture of Paper Pulp from Bordeaux Pine and Other Resinous Woods. P. M. F. Chevalier-Girard. Fr. pat. 568,630, *Mon. Papeterie Française* 55, 229 (May 15, 1924). The chipped wood is treated for 2 to 6 hrs. at 90° to 100° C., with an alkaline solution to remove the resin. The chips are then drained, washed and treated by one of the usual processes.—A. P.-C.

Fuel Consumption in the Alkaline Cooking Processes. Raymond Fournier. *Papeterie* 46, 494-502 (June 10, 1924). A discussion of the consumption of chemicals and of fuel in the usual alkaline cooking processes and in cooking under atmospheric pressure, both in batches and continuously, showing the important savings effected by the latter.—A. P.-C.

Manufacture of Pulp by Chlorination. Willi Schacht. *Papierfabr.* 22, 121-123 (Mar. 23, 1924). A further critical review of the De Vains chlorination process for pulp manufacture. A contrast is made between the sulphate and the soda pulp processes, where alkalies are employed, and the De Vains process where both chlorine and an alkali are used. The latter gives higher yields than the former but requires more rigid control. The copper numbers of straw and esparto by the chlorination process are always higher than those produced by the sulphate or the soda methods, hence oxidation of the fiber must occur. Pretreatment of the raw material with an alkali under steam pressure unnecessarily complicates the procedure and results in a considerable loss. Omission of this treatment yields a hard pulp, not capable of being used for printing papers. The recovery of the waste liquors is discussed.—J. L. P.

The De Vains Process. *Wochbl. Papierfabr.* 55, 720-722, 990-991, (Mar. 29, Apr. 26, 1924). The advantages of the De Vains chlorination process for the manufacture of pulps are: application to any raw fibrous material; direct production of white pulps from esparto, jute, straw, hemp, flax, etc., as compared to brown pulps by other processes; manufacture of pulps suitable for the artificial silk and other cellulose industries; production of bleached straw pulp which can be converted (without especial precaution on the paper machine) to a superior printing paper; use of cheap chemicals does not necessitate a recovery process; no storage room for bleaching powder is needed; the process, being continuous, is labor-saving; economy of fuel; utilization of water power; economy of production of esparto pulp as compared to usual process. The work of J. Strachan is reviewed. As a result of practical experience chlorine does not appear to attack the straw cellulose. It is posssible to manufacture three different grades of straw pulp by the De Vains method; a soft pulp, like esparto; a medium pulp, comparable to wood pulp; and a mucilaginous pulp for the manufacture of parchment papers.—J. L. P.

Malodorous Substances in Sulphate Pulp Manufacture. Peter Klason. *Paper Trade J.* 79, No. 2, 30-36 (July 10, 1924). Investigation into the nature of these substances and the possibility of preventing their formation and methods for rendering them harmless. The relief from sulphate digesters was passed through a series of absorption flasks containing lead acetate, in which was formed a yellow crystalline precipitate of lead methylmercaptide. Treatment with hydrochloric acid gave methylmercaptan (about 15 to 20 g. per cook), with odor of decayed cabbage similar to that prevalent around sulphate mills. The only odorless methylmercaptides are those of the precious metals; so that the relief gases could be purified by means of heavy metal salts. They can be rendered innocuous by passing the uncondensed portions into a furnace, or by absorbing in concentrated black liquor before incinerating the latter, any mercaptan remaining unabsorbed being thereby converted into methyl sulphide has a much weaker odor. The condensate from the relief contains about 2 l. of oil of turpentine and about 200 g. of methyl sulphide per cook, together with traces of methylamine bases, probably trimethylamine. It should be used for making up fresh liquor, thus allowing of eventual recovery of the methanol. Hydrogen sulphide and methylmercaptan can be determined quantitatively by absorbing the gases in mercuric cyanide, weighing the mercuric salts together, boiling with hydrochloric acid to decompose the mercaptide, absorbing the liberated methylmercaptan in alcohol, and titrating with iodine. Analysis of the vapors produced in experimental dry distillation of black liquor showed production of hydrogen sulphide and of methylmercaptan equivalent to 412 and 380 kilos per 24 hr., respectively; and analysis of stack gases from the smelters showed the presence of hydrogen sulphide and of methylmercaptan equivalent to 1.4 and 4.5 kilos per 24 hr., respectively. This shows that in commercial operations 99% of the sulphur compounds formed are burned, probably to sulphur dioxide, about 80% of which is neutralized by alkali volatilized in the smelter. Formation of malodorous volatile sulphur compounds is reduced to a minimum by keeping the temperature as high as possible, running the disk evaporator at such a speed that no dry distillation of the liquor takes place on the disks, and relieving the digester until the condensate no longer has a bad odor. A method of using basic lead acetate paper for controlling recovery operations is outlined.—A. P.-C.

Destructive Distillation of Black Liquor. M. L. Griffin. U. S. pat. 1,487,456, Mar. 18, 1924. Black liquor is concentrated in a vacuum evaporator to a thick syrup which is sprayed on to a horizontal cylinder rotating slowly through a retort. Oil at about 350° C. is passed through the cylinder. The material of the cylinder is rapidly carbonized and the residue is removed by a scraper at the

lowest point of travel and falls to the bottom of the retort, whence it is removed. The vapors are condensed to recover acetone, methanol, etc.—A. P.-C.

Process of Treating Waste Liquors from Soda Pulp Manufacture. Augustin Colas, Joseph Colas, and the Alfa Societe Anonyme pour la Fabrication des Pates de Cellulose. Ger. pat. 394,680. *Papierfabr.* 22, 224-225 (May 18, 1924). Waste liquors from the soda pulp process, in particular from esparto pulp, are treated with a flocculating agent, as calcium acetate, whereby the colloid particles are completely, or in part, precipitated. The precipitate is washed and treated with a solvent to remove the resins and fats, and the other constituents of the mass are separated by fractional solution, freezing, etc., or the resin-free material is subjected to dry distillation. The mass may be fermented and thereby bcome a source of ethyl alcohol. The original filtrate is treated with a base, as calcium or magnesium oxide, or animal charcoal, to free it from residual impurities, which are dry distilled and the base recovered. The remaining liquid is distilled and the volatile constituents thereby removed.—J. L. P.

Furnace for Dry Distillation of Waste Liquors. E. L. Rinman and G. F. Magnuson assignors to A. B. Cellulosa. U. S. pat. 1,483,554, Feb. 12, 1924 The liquor is spread out in thin layers on a series of trays on trucks which can be run into the distillation chamber, the sets of trays on all the trucks being at the same level so that when the trucks are placed end to end they form continuous horizontal passages throughout the entire row. Heat for distillation, which is carried out to a maximum temperature of 500° C., is supplied by electric heaters or by radiators through which hot combustion gases circulate. The heater is in a chamber adjacent to the distillation chamber and a fan circulates the heated air from the former to the latter.—A. P.-C.

Black Liquor Treatment. J. L. B. A. Colas and A. P. J. Colas and L'Alfa Co. Fr. pat. 553,704. A catalyst, preferably an organic acid, is added to cause flocculation. For example 100 l. of black liquor are treated with 5 l. of cold saturated oxalic acid solution, stirred for 15 min., and centrifuged. The precipitate is treated with saturated oxalic acid solution at the rate of 1 l. of acid for 3 kilos of precipitate and stirred half an hour The liberated fatty acids are removed by filtration, decantation, and extraction by means of a suitable solvent. About 15 to 20% of lime is then added to the liquor from the first oxalic acid treatment, which is centrifuged and filtered. The lime is extracted and then burnt for reuse; and the residual liquor is distilled to recover volatile substances, and finally incinerated to recover the alkali.—A. P.-C.

Pulp from Resinous Woods. A. R. Subervie. Fr. pat. 569,454. The logs are treated in an autoclave with superheated steam at 250° C. The melted resin is collected and drawn off, and any volatile compounds formed may be recovered. The steamed wood is chipped and treated with hot weak sodium carbonate solution to remove the remainder of the resins, the treatment being carried out in a series of tanks through which the liquor is circulated so that the strongest liquor acts on the almost completely extracted wood, while the weakest liquor acts on the fresh untreated wood. The deresinified wood is crushed and simultaneously sprayed with a hot solution of sodium carbonate and sulphate and of hypochlorite to oxidize the lignocellulose and facilitate the disintegration. The material is then ready for the beater and can be bleached as usual. An apparatus for carrying out the process is also described.—A. P.-C.

Process for Extracting from Vegetable Substances Products for Use in Manufacture of Paper. E. Wuensch and P. Kopper. Eng. pat. 214,882, July 9, 1923. Finely divided, insoluble or sparingly soluble substances, especially such as are of a colloidal or absorbent nature, are used in conjunction with a liquid medium, e. g. water, or preferably weak solutions of alkali, solutions of alkali carbonates, normal or acid sulphites, soaps, Turkey-red oil, or the like, to promote changes in the intercellular substances of vegetable fibrous material, so that these incrusting materials become friable and readily removable by washing or combing. The process may be carried out at the normal temperature and pressure, or at high temperatures and pressures, or in a partial vacuum. These finely divided substances appear to act as catalysts, the function of the liquid medium being to facilitate their penetration into and intimate contact with the incrusting materials, and are therefore readily recovered unchanged for further use. Suitable substances include the oxides and hydroxides of the alkaline-earth metals, wood tar, blood charcoal, absorbent or similar charcoal, bole, kalin, clay, loam, insoluble or sparingly soluble salts, especially those which may be produced in a fine state of division by precipitation, such as barium sulphate precipitated cold, calcium sulphate and carbonate, phosphates, etc.—A. P.-C.

Mechanical Processes

Controlling the Feeding of Wood to Grinders. P. Priem assignor to American Voith Contact Co. U. S. pat. 1,492,389, Apr. 29, 1924. The feed of the pressure foot in the pockets is operated by a suitable fluid motor. In the piping which delivers the operating fluid to this motor is a throttle valve controlled by a solenoid in the circuit of the electric motor driving grinder. Increase in the load on the grinder, and consequently on the motor, increases the current, which operates the solenoid to close the throttle, reducing the rate of feed; and decrease in the load opens the throttle wider, thereby increasing the rate of feed.—A. P.-C.

Controlling the Feeding of Wood to Grinders. P. Priem assignor to American Voith Contact Co. U. S. pat. 1,492,390, Apr. 29, 1924. The patent embodies the same principle as the previous one, but is applied to continuous feed of magazine grinders. The feed chains are driven through worm gearing, driven in turn by a fluid motor, which is regulated in the manner specified in U. S. pat. 1,492,389.—A. P.-C.

Feeding Wood in Magazine Grinders. P. Priem assignor to American Voith Contact Co. U. S. pat. 1,493,382, May 6, 1924. In order to obtain sufficient pressure on the logs which are in the center of the magazine, to force them against the stone with the desired pressure, the lateral pressure of the feed device against the sides of the block mass is increased. As a consequence the frictional engagement between the blocks of the charge is so increased that the grip of the feeders on the sides of the charge is transmitted to the interior of the mass, and the latter is forced against the stone with the desired pressure. Several ways of accomplishing the desired results are described.—A. P.-C.

Electrical Control for Wood Grinders. Anon. *Papierfabr.* 22, 208-210 (May 11, 1924); 220-221 (May 18). A popular article on the electrical control of mechanical pulp grinders, with especial reference to German practice.—J. L. P.

Mechanical Disintegrator for Wood. Rudolf Kron. Ger. pat. 393,025. *Papierfabr.* 22, 167 (Apr. 13, 1924); *Wochbl. Papierfabr.* 55, 1285 (May 24, 1924). A crushing mill for wood is described which is capable of handling wood of varying dimensions.—J. L. P.

Safety Device for Hydraulic Wood Grinders. Escher Wyss u. Cie. Ger. pat. 393,672. *Papierfabr.* 22, 187 (Apr. 27, 1924). A safety device is described by which the burning of wood, in wood grinders with hydraulic pressure, is prevented.—J. L. P.

Feed Regulator for the Presses of Grinder Pockets. W. Thaler. U. S. pat. 1,484,585, Feb. 19, 1924. The fluid which exerts pressure on the pistons of the grinder pockets passes through throttle valves (one for each pocket), so that if, for any reason, the piston is held back, the pressure on it increases, while if it advances too rapidly the pressure decreases. The feed is thus maintained substantially uniform, regardless of variations in individual power demand for the purpose. The device can be combined with the power regulator or may be independent of it.—A. P.-C.

Decay of Wood and Groundwood Pulp. Relation of Loss in Weight to Chemical Properties. Mark W. Bray. *Paper Trade J.* 78, No. 23, 58-60 (June 5, 1924). With data obtained from the chemical analysis of samples of groundwood inoculated with certain

wood-destroying fungi, the following interrelationships have been established: solubility in hot water, solubility in 1% caustic soda, cellulose and lignin contents; and a relationship between these values and the "volatile" and "total" losses suffered during decay has been demonstrated. In the case of groundwood infected with the fungi studied, the above values and losses can be calculated with a fair degree of accuracy from the solubility in 1% caustic soda.—A. P.-C.

Process for Disintegrating Vegetable Material in Pulp Manufacture. *Cellulose et Papiers.* Fr. pat. 569,556. The material is subjected to repeated impacts and rubbing actions by forcing it by centrifugal force through a series of screens which are in motion relatively to one another. The rate of circulation of the material increases between the successive screens, without any increase in power consumption, owing to the gradual disintegration. The apparatus consists essentially of a series of concentric baskets, such as are used in centrifuges, which are placed inside one another, and which are rotated at different speeds or in opposite directions. The sides of the baskets consist of circular screens or gratings built up of bars suitably spaced, e. g., 0.05 m. apart.—A. P.-C.

Bleaching

Bleaching of Wood Pulp. II. Factors Affecting Process and Their Control. C. E. Curran and P. K. Baird. *Paper Trade J.* 79, No. 1, 56-58 (July 3, 1924). The factors involved in bleaching include: temperature of bleaching, consistence or concentration of the pulp, condition of the pulp (wet or dry), kind of pulp, bleaching agent used, concentration of the bleaching agent, hydrogen in concentration of the bleaching solution, impurities in the bleach liquor, time of bleaching, rate and method of mixing, catalysis, impurities in the water used. The more important effects of these factors may be observed by following variations in: time or velocity of bleaching, yield, color of the pulp (whiteness), strength and chemical properties of the bleached pulp, uniformity of bleaching, power or steam consumption, economy of waste of bleach. The apparatus used and the technique followed in making the tests are described in detail. II. Effect of Hardness of Water. *Paper Trade J.* 79, No. 3, 41-43 (July 17, 1924). Comparative bleaching tests carried out with hard artesian well water, medium hard lake water, water treated by the permutit system to zero hardness, and distilled water showed no differences attributable to the waters. Changes in color of pulps cooked by the alkaline process may be brought about by differences in acidity or alkalinity of the wash water used; but in the present case such differences were inappreciable.—A. P.-C.

Process of Bleaching Paper Pulp. R. Hamburger and S. Kaez. Eng. pat. 209,073, Dec. 21, 1923. The moist pulp is bleached by means of chlorine peroxide, either gaseous or in solution. Excess of chlorine peroxide has no deleterious effect on the fibers.—A. P.-C.

Increasing the Rate of Bleaching. H. L. Arrat. Fr. pat. 570,353. The inventor makes use of the action of hydrocellulose and of oxycellulose on copper salts and of that of carbon dioxide on hypochlorites to hasten the speed of bleaching. The stock from the breaker beater must not be washed too much so as not to remove the oxycellulose and hydrocellulose. It is allowed to macerate for about half an hour with a solution of a mixture of copper nitrate and sodium bicarbonate or carbonate. In the presence of hydrocellulose or of oxycellulose the copper nitrate decomposes with liberation of nitric acid, which is immediately neutralized by the carbonate with the formation of sodium nitrate and liberation of carbon dioxide. The pulp is finally bleached with chlorine gas or hypochlorite solution in the usual manner. The bleaching takes place almost instantaneously with a minimum consumption of bleach.—A. P.-C.

Preparation of Bleach Liquor. J. H. MacMahon assignor to Mathieson Alkali Works, Inc. U. S. pats. 1,481,106 and 1,481,107, Jan. 15, 1924. Liquid chlorine is allowed to evaporate and passes through a suitable reducing valve, and is then absorbed in milk of lime. The cooling of the chlorine due to evaporation and expansion is used to cool down the absorption liquor and to prevent excessive heating which would cause formation of chlorates. No. 1,481,106 covers the process and No. 1,481,107 covers the apparatus.—A. P.-C.

Stable Hypochlorite Mixture. R. E. Gegenheimer assignor to Mathieson Alkali Works, Inc. U. S. pat. 1,481,003, Jan. 15, 1924. Calcium hypochlorite is mixed with sodium carbonate in reacting proportions to obtain a stable mixture which can be used for making bleaching solutions.—A. P.-C.

Manufacture of Hypochlorites. M. C. Taylor, C. A. Gammal and R. E. Gegenheimer assignors to Mathieson Alkali Works, Inc. U. S. pat. 1,481,039, Jan. 15, 1924. Hypochlorous acid is extracted from its aqueous solution with a reagent such as ether, chloroform, carbon tetrachloride or tetrachloroethane and alcohol, which will not extract chlorides, and the extracted hypochlorous acid is used to react with an alkaline compound such as calcium hydroxide to form hypochlorite.—A. P.-C.

Manufacture of Hypochlorites. M. C. Taylor, R. B. MacMullen and R. E. Gegenheimer assignors to Mathieson Alkali Works, Inc. U. S. pat. 1,481,040, Jan. 15, 1924. An extract of hypochlorous acid in an organic solvent such as carbon tetrachloride and alcohol is used to react with lime or other hydroxide to form hypochlorite. An excess of available chlorine is used above that theoretically required to react with the hydroxide.—A. P.-C.

Manufacture of Bleaching Powder Solution. J. H. MacMahon assignor to Mathieson Alkali Works, Inc. U. S. pat. 1,474,831, Nov. 20, 1923. A bleaching powder of stable character, substantially free from excess lime and from any markedly alkaline reaction, is prepared by mixing bleaching powder containing an excess of lime with water and treating the mixture with chlorine.—A. P.-C.

Corrugated Pulp Board. A. Cole. Eng. pat. 209,114, Sept. 28, 1922. A waterproof corrugated board is produced by applying to one or both sides of a corrugated sheet a sheet of paper treated on one side with pitch oor other waterproofing adhesive. The pitch side is applied to the corrugated sheet. The treated sheet may be applied to a corrugated sheet to which a sheet of paper has been attached by ordinary adhesive.—A. P.-C.

Machine for Manufacture of Wall Board. S. Cooper, assignor to A. Bishopric. U. S. pat. 1,461,724, July 17, 1923. A web of heavy paper or cardboard is coated with a suitable adhesive, preferably asphalt, rolls being provided to regulate the thickness of the layer, and laths are then applied before the adhesive has set. The laths are preferably in the form of wooden strips with beveled side, the narrower face being in contact with the paper so as to provide undercut dovetail plaster keying grooves.—A. P.-C.

Paper Mill Calculator. B. M. Sorokin. *Bum. Prom.* 3, No. 2, 86-88 (Feb., 1924). Description of a new instrument for simplifying calculations of paper mill costs.—M. L. C.

Composition of Some Grades of Paper. A. Rettori. *Papeterie,* Spec. No. 239-268 (Dec., 1923-Jan., 1924). The more usual compositions are given for a large number of grades of printing, wrapping, boards, tissues and specialties.—A. P.-C.

Colloids. Jacques Crolard. *Papeterie,* Spec. No. 113-124 (Dec., 1923-Jan., 1924). A brief review of general fundamental principles, more particularly from the standpoint of studying colloidal phenomena in paper making.—A. P.-C.

Sulphite Liquor in Rat Poison. L. H. England and L. Shapiro. U. S. pat. 1,498,722, June 24, 1924. A solution is prepared of 98 parts of sodium cyanide, 136.3 parts of zinc chloride, and 25 parts of sulphite waste liquor (all by weight). The new product formed by this combination is called "alpha-cyanotoxin." It is claimed to act so quickly that the rat has no chance to move any distance from the place of eating.—A. P.-C.

Tanning Extract from Sulphite Waste Liquor. W. H. Dickerson, assignor to Industrial Waste Products Corp. U. S. pat. 1,497,627, June 17, 1924. Hydrogen sulphide is blown through the cooled

liquor for several hours until there is no further increase in the sulphur precipitate, which is then removed by filtration or decantation. The lime may be removed, either before or after the hydrogen sulphide treatment, by addition of oxalic acid or of a soluble sulphate. The liquor may be concentrated either before or after with hydrogen sulphide or with the lime precipitant. Lactic, acetic, or other organic acid may be added to improve the tanning qualities. This treatment is claimed to give a superior product for tanning, leathers treated with it drying out much softer than those tanned in sulphite waste liquor extracts, hitherto produced. When oxalic acid or ammonium sulphate has been used to precipitate the lime, the extracts have the power of completely dissolving the "reds" or insolubles of quebracho and similar tanning materials.—A. P.-C.

Utilization of Wood Refuse and Waste Sulphite Liquor in Pulp Mills. Carl G. Schwalbe. *Papierfabr.* 22, 169-174 (Apr. 20, 1924); *Paper* 24, No. 5, 190-191 (May 22, 1924); *Paper Trade J.* 78, No. 26, 47-48 (June 26, 1924). The present methods of utilizing wood refuse and waste sulphite liquor in pulp mills are critically discussed. A description is given of the so-called "wet carbonization" process for cellulosic material in the presence of salt solutions, as magnesium chloride, heated to 200° C. The carbonization is complete in 4 to 8 hours; in an experiment with pine wood the yield in charcoal was 55 per cent, as compared to 30 per cent by dry distillation. Three to four times as much acetic acid is obtained and double the amount of wood spirit (menthanol) as with the dry distillation process. The resulting charcoal has an ash content of about 3 per cent and can be used as a fuel or as an adsorbent in pulp mills. The salt, for the most part, can be recovered. This process can be applied with success to waste sulphite liquor for the manufacture of charcoal and organic substances. It is estimated that 500,000 tons of charcoal, the large quantities of acetic acid and methanol, can be produced annually from waste sulphite liquor in Germany.—J. L. P.

Paper Drying Tests

The Paper Drying Committee, W. N. Baker, Chairman, urges that reports of paper drying tests or results of continued operation based on the Paper Drying Code be sent in before the end of the year. The Committee will be glad to analyze and tabulate the tests sent in and prepare a résumé for discussion at the annual meeting the week of February 2, 1925. The reports should be sent to the secretary's office, 18 East Forty-first Street, New York city.

Corporate Membership

The Technical Association is pleased to report that St. Regis Paper Company, Watertown, has been elected a Corporate Member, indicating its endorsement of the policy and activities of the Association.

Artificial Silk Production*

All artificial silks are forms of cellulose, but they are very different in their formation and in their chemical reactions. The principal synthetic fibers produced commercially today as artificial silks are:

1. Chardonnet, collodion, or pyroxylin silk. This is made from a solution of nitrated cellulose in a mixture of alcohol and ether.
2. Cuprate, or cuprammonium silk. This fiber is also variously known as Pauley's silk, Glanzstoff, Thiele, cellulo, and Parisian artificial silk. Cotton linters form the raw material and the silk is made from a solution of cellulose in ammonical copper oxide.
3. Viscose. This is prepared from a solution of cellulose thio-carbonate. Wood pulp is the raw material and this is by far the most widely manufactured artificial silk at the present moment.
4. Acetate silk, cellestron, or "Cellanese". This is made from a solution of cellulose acetate.

It is well to realize that many characteristics of these silks while unsuitable for one type of textile may be suitable for another. For example, Chardonnet has the peculiar feel and scoop of real silk and cuprate has a high resistance to water (in comparison only with other artificial fibers).

When so much is being said about the future prospects of synthetic fibers it is well to recognize their several failings. All lose in elasticity in the presence of water and a boiling caustic bath is destructive. This feature must be most carefully considered by anyone producing goods for India, for there the "dhobi" or laundry man has his own methods of washing, and they would be ruinous to an artificial silk fabric. India has built up its laundry methods upon washing cottons and it may take several generations to alter the existing system. The results of pulling artificial silk in the wet condition have created the impression that rubbing is also harmful. Carefully handled it can withstand a lot of rubbing and in the dry state wears very well indeed with the consequence that it is in increasing demand for linings.

Another important feature is that its surface area is, relative to its weight, lower than other textile fibers. This is better expressed by saying that its "covering" power is low. The cross section of the fiber has much to do with this feature, and the peculiar formation of cellulose acetate and its lower specific gravity give it a relatively greater covering power than the other forms. It should be remembered that in this direction viscose has been greatly improved, and recently developments have been carried out in the direction of creating a cellular construction, or what the writer would call an aerated fiber.

*From The Textile Mercury.

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CORRECT COSTS AT LITTLE EXPENSE*

A System for the Small and Medium Size Plant

By Gaylord G. Thompson, Manufacturing Analyst, Cutler-Hammer Mfg. Co.

The work of cost keeping is looked upon by many manufacturers as too involved and too expensive for a small or medium-size plant. The elaborate systems adopted by large concerns, are undoubtedly open to these criticisms when applied to an organization employing only a few hundred workers. But when stripped of extreme refinements and condensed to give approximately correct results at little expense, a cost system proves of invaluable aid in running even a small plant. The present article explains a system for use in a factory where the management is concentrated in a few major executives and where it is imperative to keep clerical work at a minimum in the interest of profits. For purposes of clearness of illustration the methods are outlined as applied to a plant manufacturing plumbing goods. But the utility of the system extends to practically all branches of industry.

A large factor contributing to the difficulties of a cost-keeping system in plumbing and brass goods industries is the lack of standardization in manufactured products, especially where it affects combinations of fixtures or units. The element of standardization as it would apply strictly to every detail in plumbing installations is practically impossible. Building constructions will continue to reflect a certain amount of individuality of designs; consequently the plumbing industries have no other alternative than to meet these conditions as a characteristic demand of the trade.

Depend on Estimating

The installation of a cost system in a plant manufacturing a large variety of plumbing goods is a proposition in which the eccentric nature, style, and combinations involved, present problems of cost accounting so difficult of solutions consistent with simplicity, that a large number of manufacturers or dealers in this class of goods depend mostly upon estimating, or the "by guess and by gosh" method of cost keeping.

Then, again, there are some concerns that base their selling prices on comparisons with competitor's prices and trust to luck that inventory time will reveal the hoped-for profits. It is a fact that two competitive concerns were known to be watching each other's price list and setting their own respective prices accordingly. Each one thought the other had a good cost system. It is amusing to view this practice from one angle, but a serious proposition to those who must stand for the inevitable financial crash when such methods are carried on without curtailment.

Competition in the manufacturing and distribution of general brass goods and plumbing supplies is more acute than in most of the other phases of industrial activity. This condition is largely superinduced by the price slashing practices of the numerous small concerns that do not know their accurate costs.

One plumbing goods manufacturer was known to have placed a large quantity of goods in a virgin territory at a figure that was impossible to conceive as profitable. The competitor, who was already established in this territory, undoubtedly knew his costs, and after forcing the market to a new low level, he withdrew from this territory goods that did not show a profit. This step left the new competitor with the undesirable part of the field to himself and with a mess of unprofitable orders on his hands. After he finds that his profits are missing he will have a hard job trying to convince the trade that a higher price must be established.

The concern which knows its costs and ordinarily will not go below them to meet competition is the one which can meet the sharpest possible competition intelligently and without loss. It is true that some orders will be lost, but in the long run it is best to let them go to the concern which, in many cases of unusually low prices, does not know its true costs, and thereby runs the danger of "cutting its own throat". If the orders are large they will probably put this competitor out of business, in which event the concern knowing its costs will again control the market without sustaining any losses, and at the same time will have gained greater prestige and the confidence of the trade because of stability.

Fundamental Principles the Same

Although the cost system described in this article is intended primarily for manufacturers, it nevertheless contains features of cost keeping that will apply to jobbers and dealers in plumbing goods. The fundamental principles of the entire system remain the same for all. In presenting this system, consideration has been given to the fact that manufacturers of plumbing goods are, in the majority of cases, small concerns when it comes to questions of floor space and number of people employed. The volume of business and the scope of marketing territory are, however, the proper gages of size. In this article, references to the small concern apply the firms which find that intricate and refined methods of cost keeping and recording are not absolutely essential. The methods described are adapted for use where no fine line is drawn to separate the functions of numerous executives and department heads.

The chart shown in Fig. 1 is a fair example of how the functions of plant management have been condensed to require the time of only

*From "Management and Administration."

three major executives, while the cost system described in this article is operated by two or three clerks in the office. This chart represents the organization of a plumbing goods manufacturer doing a business amounting to $400,000 to $700,000 per year and capable of greater capacities with the same office force.

A system of cost keeping in a small concern must have features of flexibility that will readily adapt it to expansion as the concern grows. At all times it must more than pay for its cost and not overgrow the concern so that it becomes a burden unproportionate to profits.

The accuracy of a compilation of cost records depends upon the accummulation of facts from which cost information is obtained. It is a simple matter to allocate the various charges and credits when proper costs are known. The method used to originate these cost figures is in most instances the cause of failure in the installation of a cost system. Too much red tape or a conglomeration of forms for collecting minute details of cost facts, with its consequent increase in clerical work and possibility of multiplied errors, is often worse than an approximate cost system.

Most Valuable Cost Facts

A cost derived without the use of forms containing minute details, but practically reliable in its conclusion, is the one of most value to the executive in guiding the destinies of his business. The predominant demand of most executives is for conclusive cost facts and not for the means of determining these conclusions. The method of

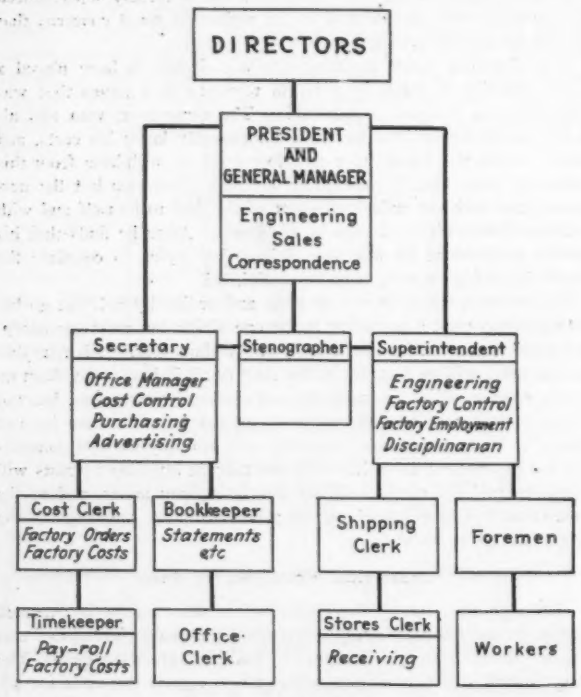

FIG. 1
ORGANIZATION CHART FOR MEDIUM-SIZE CONCERN

arriving at cost conclusions is reviewed as a matter of supervision by the executive for his own satisfaction and at a time when his other duties are not demanding his immediate attention.

The problem is, therefore, to eliminate all functions involved in the originating of costs that do not contribute to facts upon which to base immediate conclusions. Data or records which are compiled after conclusions or decisions have been made, are often worthless, even though they may be interesting from a historical standpoint.

Simplicity in the method of originating cost data is of more pronounced possibility in a small concern, for which this article is intended, than in a large concern. Consequently a broad viewpoint must be assumed where seeming impossibilities appear, or where the explanations are of an elementary nature.

The classifying of accounts is practically, although not necessarily, the first step in the installation of a cost system. The fundamental principles of such a classification constitute an element of standardization characteristic of all forms of accounting practice. Complexity or simplicity in classifying accounts is largely the result of judgment or opinion of those in charge of this function. However, this judgment or opinion may be influenced or superinduced by external circumstances encountered in different types of manufacturing concerns. In any event, simplicity consistent with accuracy is the desired goal.

The following classification of accounts is given here to convey a better understanding of the discussion in the paragraphs to follow. It will be noted that the account numbers tend to forward numerical sequence. The missing numbers between some of the account numbers are left open for any possible addition of new accounts.

Current Assets

Acct. No.	
1	State Bank
2	Petty Cash Fund
3	Notes Receivable
4	Accounts Receivable
7	Personal Accounts
10	Stores
11	Supplies
12	Work-in-Press
14	Tool-Making Material and Labor
15	Pattern-Making Material and Labor
17	Premium on Life Insurance

Fixed Assets

Acct. No.	
19	Land
20	Buildings
22	Building Improvements
23	Machinery and Equipment
24	Flasks
25	Permanent Tools
26	Perishable Tools
27	Patterns and Drawings
28	Delivery Equipment
29	Patents
30	Office Furniture and Fixtures
31	Factory Furniture and Fixtures
36	Prepaid Insurance
37	Prepaid Subscriptions
38	Prepaid Advertising

Current Liabilities

41	Notes Payable—Bank
42	Notes Payable—Trade
43	Accounts Payable—Trade
44	Accounts Payable—Personal
48	Accrued Pay-Roll
49	Accrued Commissions
50	Accrued Taxes
54	Allowance for Depreciation—Buildings
55	Allowance for Depreciation—Building Improvements
56	Allowance for Depreciation—Building Machinery and Equipment
57	Allowance for Depreciation—Flasks
58	Allowance for Depreciation—Permanent Tools
59	Allowance for Depreciation—Patterns and Drawings
60	Allowance for Depreciation—Delivery Equipment

61 Allowance for Depreciation—Patents
62 Allowance for Depreciation—Office Furniture and Fixtures
63 Allowance for Depreciation—Factory Furniture and Fixtures
71 Land Contract
77 Surplus
78 Profit and Loss
79 Dividend
88 Current Profit and Loss
90 Sales
95 Cost of Goods Sold
100 Selling Expense
200 General and Administrative Expense
400 Rent Received
401 Discount Earned
402 Miscellaneous Sales
403 Interest Received
409 Contra Net Income
420 Discount Allowed
421 Interest Paid
422 Interest on Land Contract
423 Donations
429 Contra Other Expense

Work in Process

Acct. No.	
12-1	Material Used—Factory
12-2	Foundry—Direct Labor
12-3	Foundry—Indirect Labor
12-4	Foundry—Gas
12-5	Foundry—Supplies
12-6	Foundry—Repairs
12-7	Foundry—Depreciation
12-8	Foundry—Insurance
12-9	Foundry—Taxes
12-10	Foundry—Light and Power
12-11	Foundry—Material Used
12-14	Cost of Castings
12-15	Machine Shop—Direct Labor
12-16	Machine Shop—Indirect Labor
12-17	Machine Shop—Supplies
12-18	Machine Shop—Repairs
12-19	Machine Shop—Depreciation
12-20	Machine Shop—Insurance
12-21	Machine Shop—Taxes
12-22	Machine Shop—Light and Power
12-23	Machine Shop—Tool Supplies
12-24	Machine Shop—Tool Repairs
12-25	Machine Shop—Pattern Supplies
12-26	Machine Shop—Pattern Repairs
12-27	Machine Shop—Experimental Work
12-28	Machine Shop—Outside Labor
12-36	Polishing and Plating—Direct Labor—Polishing.
12-37	Polishing and Plating—Indirect Labor—Polishing
12-38	Polishing and Plating—Supplies—Polishing
12-39	Polishing and Plating—Repairs—Polishing
12-40	Polishing and Plating—Depreciation
12-41	Polishing and Plating—Insurance
12-42	Polishing and Plating—Taxes
12-43	Polishing and Plating—Light and Power
12-44	Polishing and Plating—Indirect Labor—Plating
12-45	Polishing and Plating—Supplies—Plating
12-46	Polishing and Plating—Repairs—Plating
12-55	Assembling—Direct Labor
12-56	—Indirect Labor
12-57	Assembling—Supplies
12-58	Assembling—Repairs
12-59	Assembling—Depreciation
12-60	Assembling—Insurance
12-61	Assembling—Taxes
12-67	Store—Packing—Shipping—Labor
12-68	Store—Packing—Shipping—Supplies
12-69	Store—Packing-Shipping—Repairs
12-70	Store—Packing—Shipping—Depreciation
12-71	Store-Packing-Shipping—Insurance
12-72	Store—Packing—Shipping—Taxes
12-73	Store-Packing—Shipping—Light and Power
12-74	Store—Packing—Shipping—Delivery Equipment Maintenance
12-81	General Factory—Labor
12-82	General Factory—Supplies
12-83	General Factory—Repairs—Buildings
12-84	General Factory—Water and Gas
12-85	General Factory—Heating
12-96	General Ledger Control Account

Selling Expense

Account No.	
100-1	Commission
100-2	Bonus
100-3	Travelling Expense
100-4	Salesmen's Samples
100-5	Freight, Express and Cartage "Out"
100-6	Salaries
100-7	Advertising
100-8	Photos and Catalogs
100-9	Postage
100-10	Supplies and Stationery
100-11	Telephone and Telegrams
100-12	Subscriptions and Dues
100-25	Contra Selling Expense

General and Administrative Expense

Account No.	
200-1	Officers' Salaries
200-2	Office Salaries
200-4	Supplies and Stationery
200-5	Professional Services
200-6	Telephone and Telegrams
200-7	Postage
200-8	Cleaning
200-9	Subscriptions and Dues
200-10	General Travelling Expense
200-11	Insurance
200-12	Taxes
200-13	Repairs
200-14	Water, Light and Gas
200-15	Heating
200-16	Depreciation
200-40	Contra General and Administrative Expense

It will be noted that account Number 14 is assigned to "Tool-Making Material and Labor" and Number 15 to "Pattern-Making Material and Labor". These accounts are partly stores accounts, but owing to the small quantity of materials involved it was found most expedient to make charges for materials direct to these accounts and have the materials delivered direct to the toolmaker or pattern-maker, respectively, instead of through the storeroom. These accounts are credited for the amount of materials and labor used in the making of a tool or pattern and charged into the fixed asset accounts according to the nature of the asset. The method of obtaining costs of patterns or tools will be explained in the section entitled "Issuing of Factory Orders", to follow in another instalment.

COST SECTION

Overhead or Burden

The distribution of overhead or burden in a manufacturing concern involves more complexities than those experienced by jobbers or dealers. A flat overhead rate is more easily applicable to a jobber's business than to that of a manufacturer. Departmental overhead rates are, for manufacturers, by far the most accurate means of getting true costs. If a flat rate of overhead is used in manufacturing regardless of departments, the costs on some articles will be more or less than what they should be, with the consequent danger of receiving large orders for articles on which a loss is actually sustained and very few orders for those on which a profit could presumably be realized.

An example of this condition is found where an article requires very little machine work in proportion to bench work. Bench work does not incur the high expense that machine work does. Consequently if bench work is forced to carry the same overhead as the machine work, the apparent cost of articles requiring mostly bench work will be excessive and will reflect itself in lost sales. The reverse of this condition is of greater danger because of unseen losses that might creep in through orders on which the application of a flat rate of overhead is insufficient. The law of averages does not apply to percentages of a flat overhead rate for all manufacturing departments combined. To force this inclusion is often the cause of red ink entries in the "sad news" column of the ledger.

The apportioning of overhead or burden can be handled in several ways; first, by application to direct labor cost; second, by application to direct labor cost; second, by application to direct labor time; and third, by the machine hour rate. The first method is the most convenient and simple and is fairly accurate where wages are uniform. However, if wages are not uniform, the second method is the better of the two. For example, a worker earning 50 cents an hr., who completes a job in one hour will show a direct labor cost of 50 cents for the job. Assuming that the overhead is 60 per cent of direct labor cost, the overhead charges will be 30 cents. Now then, if this same job is finished in the same time by a worker whose rate is 30 cents an hr., the overhead rate would be only 18 cents instead of 30 cents in spite of the fact that the same amount of time, floor space, power, etc., were used. If the overhead rate were based on labor time instead of labor cost, the overhead charges would have been the same, which is the correct result.

Where a shop has a piece-work system installed, the inconsistencies of overhead figures as applied to direct labor cost are largely overcome because of the existence of standard labor costs for the various operations involved in manufacturing. The overhead referred to in the further discussion of the system described by this article, is based on percentage of direct labor cost. For plumbing goods manufacturers this method has proved satisfactory, particularly with piece work.

Nickel Plating Operations Carried in Overhead

Many plumbing goods manufacturers have their own nickel plating departments. Consequently a discussion of nickel plating costs is appropriate at this point. Where quantities of goods that are fairly uniform can proceed through the operations of nickel plating without continual interruption, the method of obtaining costs can be carried out on the same basis as costs in the machine shop, or on the weight basis.

As a rule, however, the nature of plumbing products is not so standardized but what a considerable amount of special nickel plating operations must be performed. A piece of this and a part of that must often be plated to complete special combinations made to order. To maintain accurate costs under these conditions is practically impossible as the cost would be prohibitive.

A method used to overcome this trouble is to treat the entire nickel plating department as an overhead item and distribute it in proportion to direct labor cost on *nickel buffing*. The nickel buffing operation is chosen to assume the overhead distribution of nickel plating because nickel buffing time bears a very consistent relation to nickel plating time. Although this method of determining nickel plating costs is not assumed to be the best, nevertheless results have proved satisfactory, without any expense of additional records. Its simplicity is a prominent feature in its favor, and more than offsets many arguments against it.

Kalamazoo Cost Men Meet

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., November 29, 1924.—"The Place of the Accountant in Industry" was the topic of an interesting talk given Monday evening by Thomas J. Burke, New York, secretary-treasurer of the Cost Association of the Paper Industry. Mr. Burke was the guest of honor at a special dinner session at the Kalamazoo local, held at the Park-American hotel.

The speaker at once made it apparent that an accountant has no business to perch himself on top of a stool and stay there, but that he should understand to a degree the physical aspects of those items he is putting down in figures.

"The Cost Association of the paper industry is becoming more and more a vital factor of that industry," the speaker said. "Papermaking faces a period of keen competition and in that condition lies the real opportunity for all intelligent accountants to help their respective concerns. No one minds keen competition, it is ignorant competition that hurts and really causes the mills to sell their products at a loss and ultimately forcing a loss on the entire industry.

"It is right here that the intelligent accountant fits in. He should not be content to do things the same as years past, but seek improvement. Systems may differ in various mills, but the basic idea must at all times be correct."

Mr. Burke declared that the paper industry always faces the danger of having too much money in fixed assets and not sufficient working capital and said that the really intelligent accountant is in position to partially relieve that evil by a study of those fixed assets and their proper segregation, also by a study of discounts.

"Every mill should have a perpetual inventory," he said. "To keep an inventory correctly the accountant should know the production program and sales program of his concern. The competent sales manager should be able to analyze the market six months ahead, thus keeping the production department well informed, thereby eliminating losses that have occurred in the past."

Duncan Rice of the Lawrence Scudder Company and Mr. Meyers of the Burroughs Adding Machine Company were other speakers on the program. Dinner was served at 6:30, about 25 gathering at the table.

Salesmen's Convention Committee

The following committee has been appointed to arrange for the annual convention of the Salesmen's Association of the Pulp and Paper Industry in New York during the week of February 2:

Chairman, Chester M. Robbins, St. Regis Paper Company, 30 E. 42nd street, New York; G. G. Abernethy, International Paper Company, 100 E. 42nd street, New York; Ralph W. Collins, Dill & Collins Company, 1170 Broadway, New York; R. D. W. Ewing, American Writing Paper Company, 41 Park Row, New York; W. Lloyd Heath, H. G. Craig & Co., 52 Vanderbilt avenue, New York; T. A. Hendry, Mead, Patton & Co., 342 Madison avenue, New York; Edwin D. Peck, Reading Paper Mills, 342 Madison avenue, New York; J. W. Quimby, Allied Paper Mills, 471 11th avenue, New York; Roger B. Taft, Hammermill Paper Company, 291 Broadway, New York; G. M. Wetmore, Groveton Paper Company, 33 W. 42nd street, New York. Ex officio, J. L. Fearing, president International Paper Company, 100 E. 42nd street, New York; W. E. Perry, Chemical Paper Manufacturing Company, Holyoke, Mass.; F. N. Countiss, Martine Cantine Company, 501 5th avenue, New York; R. T. Houk, Jr., G. H. Mead Company, Dayton, Ohio; James H. Coy, Flambeau Paper Company, 111 W. Washington street, Chicago.

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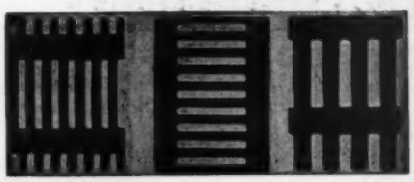

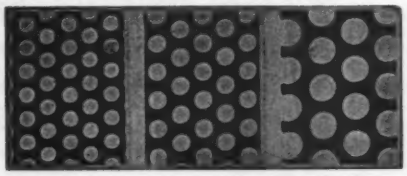

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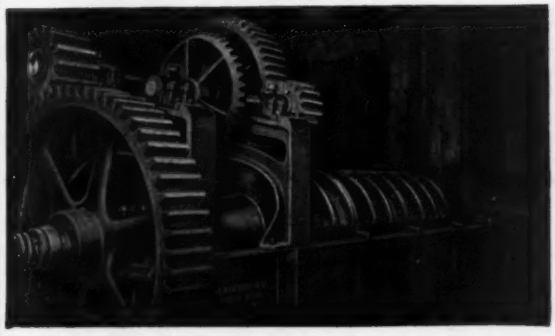

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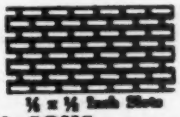

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Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 29, 1924

SUMMARY

News print .....484 rolls
Printing paper.....229 cs., 6 bls.
Wall paper.....67 bls., 14 cs.
Wrapping paper.....222 bls., 3,614 rolls, 13 cs.
Cigarette paper.....75 bls., 42 cs.
Writing paper .....19 cs.
Tissue paper .....4 cs.
Filter paper .....28 cs.
Surface coated paper.....31 cs.
Hanging paper .....390 rolls
Paper hangings.....115 bls., 3 cs.
Copy paper .....1 cs.
Drawing paper .....45 cs.
Colored paper .....3 cs.
Packing paper .....3 cs.
Decalcomania paper .....2 cs.
Tracing paper .....9 cs.
Metal paper .....21 cs.
Miscellaneous paper,
190 cs., 71 bls., 246 rolls, 51 pgs.

CIGARETTE PAPER

Standard Products Corp., Vincent, Havre, 42 cs.
Irving Bank Columbia Trust Company, Oregon Maru, Genoa, 75 bls.

PAPER HANGINGS

W. H. S. Lloyd & Co., Manhattan, London, 22 bls., 1 case.
A. C. Dodman, Jr., Inc., Baltic, Liverpool, 22 bls.
A. C. Dodman, Jr., Inc., Cedric, Liverpool, 52 bls.
W. H. S. Lloyd & Co., Minnetonka, London, 19 bls., 2 cs.

HANGING PAPER

Drinhausen Hoolkott Paper Company, Eastern Victor, Rotterdam, 390 rolls.

WALL PAPER

F. J. Emmerich, Cedric, Liverpool, 23 bls.
F. J. Emmerich, Cleveland, Hamburg, 7 bls.
F. J. Emmerich, Minnetonka, London, 3 bls.
A. C. Dodman, Jr., Inc., Majestic, London, 20 bls., 7 cs.
Whiting & Patterson, Inc., Mauretania, Havre, 6 cs.
F. J. Emmerich, Mauretania, Southampton, 1 cs., 8 bls.
F. J. Emmerich, Baltic, Liverpool, 6 bls.

PRINTING PAPER

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H. Reeve Angel & Co., Inc., Mauretania, Southampton, 2 cs.
P. C. Zuhlke, Belgenland, Antwerp, 62 cs.
C. Steiner, Cleveland, Hamburg, 6 bls.
B. F. Drakenfeld & Co., Cedric, Liverpool, 21 cs.
Perry, Ryer & Co., Cameronia, Glasgow, 124 cs.

NEWS PRINT

Bank of New York, United States, Copenhagen, 424 rolls.
W. Hartmann & Co., Innoko, Rotterdam, 60 rolls.

WRITING PAPER

J. W. Hampton, Jr., & Co., Mauretania, Havre, 1 cs.
Guibout Freres, by same, 12 cs.
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COPY PAPER

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PAPER

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Gilbert Paper Company, by same, 194 rolls, 70 bls.
Japan Paper Company, by same, 1 cs.
J. I. Bernitz, Innoko, Rotterdam, 11 cs.
Drinhausen Hollkott Paper Company, by same, 51 pgs.
Whiting & Patterson, Inc., Stockholm, Gothenburg, 1 bl.
E. H. Danziger, Cleveland, Hamburg, 6 cs.
The Prager Company, Eastern Victor, Rotterdam, 52 rolls.
Steiner Paper Corporation, by same, 6 cs.
E. Dietzgen & Co., by same, 13 cs.
J. I. Bernitz, by same, 16 cs.
Commercial Fibre Company, by same, 12 cs.
R. Wilson Corporation, Cameronia, Glasgow, 38 cs.
Japan Paper Company, Duilio, Genoa, 82 cs.

RAGS, BAGGING, ETC.

E. J. Keller Company, Inc., Geo. Washington, Bremen, 224 bls. rags.
E. J. Keller Company, Inc., Eastern Victor, Rotterdam, 42 bls. rags, 147 bls. jute waste.
S. Birkenstein & Sons, by same, 156 bls. rags.
American Woolstock Corp., by same, 90 bls. rags.
Reis & Co., by same, 53 bls. thread waste.
J. J. Patricof, by same, 115 bls. rags.
Castle & Overton, Inc., by same, 26 bls. rags.
Castle & Overton, Inc., Nessian, Manchester, 40 bls. rags.
Castle & Overton, Muenchen, Bremen, 11 bls. rags.
Castle & Overton, Inc., Anaconda, Rotterdam, 381 bls. rags.
Castle & Overton, Inc., Valsesia, Italy, 148 bls. rags.
E. J. Keller Company, Inc., Zeeland, Antwerp, 224 bls. flax waste.
E. J. Keller Company, Inc., Muenchen, Bremen, 58 bls. rags.
E. J. Keller Company, Inc., Minnetonka, London, 45 bls. rags.
E. J. Keller Company, Inc., Roussillon, Bordeaux, 264 bls. rags.
Albion Trading Company, Manhattan, London, 12 bls. rags.
L. H. Abenheimer, Manhattan, Antwerp, 263 bls. rags.
Stone Brothers Company, United States, Copenhagen, 507 bls. rags.
E. J. Keller Company, Inc., by same, 457 bls. rags, 193 bls. baggings.
Royal Manufacturing Company, Laconia, Liverpool, 50 bls. cotton waste.
M. Wolfer, Siboney, Havana, 32 bls. rags.
E. J. Keller Company, Inc., Cleveland, Hamburg, 471 bls. rags, 108 bls. rag pulp, 111 bls. new cuttings, 237 bls. bagging.
Brown Brothers & Co., by same, 78 bls. rags.
P. Berlowitz, by same, 16 bls. rags.
National City Bank, by same, 48 bls. rags.
E. T. Arhib Co., Inc., Schenectady, Dublin, 12 bls. rags.
Katzenstein & Keene, Inc., by same, 11 bls. rags.
Prince Kenneddy, by same, 39 bls. baggings.
Baring Bros. & Co., Hoxie, Dublin, 47 bls. wastepaper.
Brown Bros. & Co., by same, 74 bls. wastepaper.
Amsinck Senne & Co., M. S. Dollar, Alexandria, 100 bls. rags.
H. Lichtenstein, Bay State, Leith, 9 bls. rags.
Castle & Overton, Inc., by same, 25 bls. waste.
Brown Bros. & Co., by same, 55 bls. rags.
E. J. Keller Co., Inc., Liverpool, Mary, Hamburg, 230 bls. rags.
Castle & Overton, Inc., Indep. Hall, Dunkirk, 164 bls. rags.
D. M. Hicks, by same, 46 bls. threadwaste.
D. M. Hicks, Indep. Hall, Havre, 61 bls. bagging.
Atterbury & McKelvey, by same, 164 bls. rags.
Whaling Waste Products Co., by same, 84 bls. rags.
D. J. Murphy, by same, 171 bls. rags.
L. Steer & Sons, by same, 94 bls. rags.
Robe & Angles, Vincent, Havre, 71 bls. rags.
D. J. Murphy, by same, 87 bls. rags.
Belgian Bank, Baltic, Liverpool, 46 bls. rags.
R. Blank, Coaxet, Antwerp, 78 bls. rags.
Royal Manufacturing Co., by same, 15 bls. rags.
E. J. Keller Co., Inc., by same, 136 bls. rags.
C. R. Spence Co., Inc., by same, 111 bls. rags.
A. Hurst Co., by same, 21 bls. rags.
American Woolstock Corp., by same, 113 bls. bagging.
Stone Bros. Co., by same, 129 bls. newcuttings.
M. O'Meara Co., by same, 16 bls. cottonwaste.
M. O'Meara Co., by same, 55 bls. rags.
A. W. Fenton, Inc., Innoko, Rotterdam, 160 bls. rags.
J. J. Patricof, by same, 62 bls. rags.
E. J. Keller Co., Inc., by same, 269 bls. rags.
P. Berlowitz, by same, 36 bls. bagging.
D. M. Hicks, by same, 35 bls. bagging.
Castle & Overton, Inc., by same, 36 bls. rags.
Castle & Overton, Inc., Fred VIII, Copenhagen, 56 bls. rags.
Castle & Overton, Inc., by same, 63 bls. newcuttings.
E. J. Keller Co., Inc., by same, 306 bls. rags.
Stone Bros., Co., by same, 141 bls. rags.

OLD ROPE

S. Birkenstein Sons., Coaxet, Antwerp, 100 coils.
U. S. Mortgage & Trust Co., by same, 83 coils.
Brown Bros. & Co., Belgenland, Antwerp, 117 coils.
Irving Bank Columbia Trust Co., Bay State, Leith, 49 coils.
Brown Bros. & Co., United States, Copenhagen, 44 coils.
E. J. Keller Co., Inc., by same, 60 coils.

WOODPULP

Hartig Pulp Co., Eastern Victor, Rotterdam, 598 bls. 128 tons.
International Acceptance Bank, by same, 150 bls. 30 tons.
DuPont Fibersilk Co., by same, 25 bls. 5 tons.
International Acceptance Bank, United States, Copenhagen, 606 bls.
Scandinavian Pulp Agency, Inc., Stockholm, Gothenburg, 434 bls.
Price Pierce Ltd., by same, 125 bls.
Scandinavian Pulp Agency, Inc., Annersoise, Sundsvael, 500 bls. 100 tons.
Buck Kaier & Co., Alberta, Trieste, 398 bls.
Atterbury & McKelvey, Stavangerfjord, Krist ania, 440 bls.
J. Andersen & Co., by same, 600 bls.
National City Bank, by same, 150 bls.

(Continued on page 66)

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Hard Maple and Gumwood Press Rolls.
Whitewood and Red Wood Felt Rolls.
Brass Felt and Table Rolls.
Iron Cores for Rubber Rolls.
Bronze Doctor Blades.
Bronze Suction boxes and Covers.
Bronze Castings of all descriptions.

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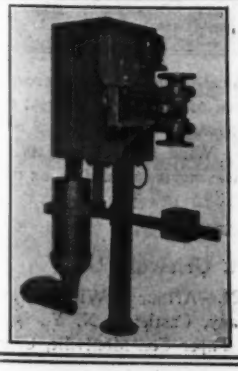

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For ALL of his Machines.

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Also "Made in Canada"

TRIMBEY MACHINE WORKS, Glens Falls, N. Y.

Imports of Paper and Paper Stock

(*Continued from page 64*)

WOODFLOUR

James Spieden & Co., Eastern Victor, Rotterdam, 478 bags, 32,900 ks.

Bakelite Corp., by same, 709 bales, 52,490 ks.

The Hansa Co., United States, Copenhagen, 2675 bags.

CASEIN

A. Hirsch & Co., Fred. VIII, Copenhagen, 8 bags.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 29, 1924

Wm. Schall & Co., Monticello, Hamburg, 45 bls. old rope.

Wilkinson Bros. & Co., by same, 6 bls. and 6 reels wrapping paper.

Chemical National Bank, by same, 102 reels newsprint.

On order, by same, 125 reels newsprint.

Equitable Trust Co., by same, 664 reels newsprint.

On order, by same, 1,196 rolls wrapping paper.

Berregaardt Co., by same, 1000 bls. dry woodpulp.

Baring Bros. Ltd., Maryland, London, 116 bls. old rags, 124 bls. wastepaper.

Brown Bros. Co., by same, 106 bls. old rope, 57 bls. wastepaper.

G. M. Graves, by same, 116 coils old rope,

Brown Bros. Co., 106 coils old rope.

G. M. Graves & Co., by same, 21 bls. old rope.

Dalton Customer, by same, 37 bls. old rags.

On order, by same, 29 bls. old rope, 148 bls. old rags.

National City Bank of N. Y., Naperian, Hamburg, 465 bls. dry chemical woodpulp.

On order, by same, 38 bls. old rags.

American Trading House, by same, 60 bls. packing paper.

First National Bank, by same, 169 rolls paper.

On order, by same, 46 bls. old rags.

Stone Bros. Co., by same, 78 bls. old rags.

On order, by same, 18 bls. old rags.

Chase National Bank, by same, 140 bls. old rags.

Castle & Overton, by same, 125 bls. old rags.

Theo. Bayersdorfer, by same, 5 crates crepe paper.

Philadelphia National Bank, by same, 46 bls. old rags.

National City Bank, by same, 58 bls. old rags.

S. Krupp, by same, 68 bls. old rags.

On order, by same, 42 bls. old rags.

E. J. Keller Co., by same, 64 bls. old rags.

Stone Bros. Co. by same, 34 bls. old rags.

Equitable Trust Co., by same, 408 bls. old rags.

Philadelphia National Bank, by same, 296 bls. old rags.

On order, by same, 58 bls. flax card waste for papermaking.

Castle & Overton, by same, 2180 bls. woodpulp.

Bank of N. Y. and Trust Co., by same, 281 bls. old rags.

Castle & Overton, by same, 266 bls. old rags.

A. Stern & Co., by same, 183 bls. old rags.

On order, by same, 417 bls. old rags.

Baring Bros. & Co., Laconia, Liverpool, 53 bls. wastepaper.

H. Hollensen & Co., West Campgaw, Hamburg, 1310 bls. wastepaper.

Ira L. Beebe & Co., Inc., by same, 3,425 bls. wastepaper.

Castle & Overton, by same, 1745 bls. wastepaper.

Lee Higginson & Co., by same, 43 bls. old rags.

Drinhausen Hollkott Co., Inc., by same, 172 reels paper.

Ira L. Beebe Co., Inc., by same, 2635 bls. wastepaper.

On order, by same, 250 bls. wastepaper.

Chemical National Bank, by same, 197 reels paper.

E. Naumberg Co., by same, 619 rolls paper.

Castle & Overton, by same, 4260 bls. wastepaper.

Ira L. Beebe & Co., Inc., by same, 600 bls. wastepaper.

H. Hollensen, Inc., by same, 2100 bls. wastepaper.

Howell Donaldson, Inc., by same, 1000 bls. wastepaper.

On order, by s. s. West Madaket, London, 44 bls. paper stock.

Equitable Trust Co., by s. s. Vasconia, London, 52 bls. old rags.

Coal & Iron National Bank, Savannah, Glasgow, 91 bls. paperstock.

Brown Bros. Co., by same, 44 bls. paperstock.

Baring Bros. Ltd., by same, 41 bls. paperstock.

G. M. Graves & Co., by same, 42 bls. paperstock.

Equitable Trust Co., by same, 122 bls. wastepaper.

Maurice O'Meara, by same, 90 bls. wastepaper.

Atlantic Paper Co., by same, 150 cs. printing paper.

John A. Steer & Co., by same, 126 bls. paper stock.

On order, by same, 145 bls. paperstock.

Old Colony Trust Co., by same, 63 coils paperstock.

Lagerloef Trading Co., Argosy, 598 bls., 100 tons chemical pulp.

Johaneson, Wales & Sparre. Inc., Bogen, Frano, 3900 bls. sulphate pulp.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 29, 1924

D. J. Murphy, Eastern Victor, Rotterdam, 457 bls. rags.

S. Birkenstein & Sons, by same, 258 bls. rags.

Castle & Overton, Inc., by same, 198 bls. rags.

Castle & Overton, Inc., by same, 82 bls. bagging.

Union National Bank, by same, 22 bls. rags.

Philadelphia National Bank, by same, 49 bls. rags.

S. Spector & Co., Hoxie, Dublin, 12 bls. rags.

Baring Bros. & Co., Coaxet, Antwerp, 74 bls. bagging.

S. Birkenstein & Sons, by same, 456 bls. rags.

J. A. Steer, by same, 128 bls. rags.

J. A. Steer, by same, 74 bls. bagging.

E. J. Keller Co., Inc., by same, 279 bls. rags.

A. Hurst & Co., by same, 3 bls. rags.

Castle & Overton, Inc., by same, 98 bls. rags.

Castle & Overton, Inc., by same, 88 bls. bagging.

G. M. Graves Co., by same, 116 bls. rags.

J. A. Steer, Vincent, Havre. 122 bls. rags.

Katzenstein & Keene, Inc., by same, 549 bls. rags.

Patterson Parchment Paper Co., by same, 14 bls. rags.

Stone Bros. Co., by same, 112 bls. rags.

Stone Bros. Co., by same, 253 bls. bagging.

Katzenstein & Keene Inc., Vincent, Dunkirk, 174 bls. rags.

J. M. Hagy Waste Works, Inc., by same, 255 bls. rags.

Atlantic Exchange Bank & Trust Co., by same, 127 bls. rags.

Castle & Overton, Inc., by same, 439 bls. rags.

Castle & Overton, Inc., Innoko, Rotterdam, 94 bls. rags.

E. J. Keller Co., Inc., Liverpool Maru, Hamburg, 74 bls. rags.

E. J. Keller Co., Inc., Idarwald, Hamburg, 474 bls. rags.

E. J. Keller Co., Inc., Idarwald, Stockholm, 139 bls. rags.

J. A. Steer, Bay State, Leith, 154 coils old rope.

True & McClelland, Vincent, Havre, 110 coils old rope.

Bemis Bros. Bag Co., by same, 229 coils old rope.

Castle & Overton, Inc., Eastern Victor, Rotterdam, 252 bls. woodpulp.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 29, 1924.

Pagel Harton & Co., Inc., Annersoise, Hosum, 2000 bls. woodpulp 500 tons.

Castle & Overton, Inc., Sac City, Rotterdam, 256 bls. woodpulp.

Castle & Overton, Inc., Fungard, Hamburg, 2025 bls. woodpulp.

Lagerloef Trading Co., Aggersund, 12,781 bls. 2217 tons chemical woodpulp.

Lagerloef Trading Co., St. Anthony, 8,785 bls. 1,505 tons chemical woodpulp.

NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 22, 1924.

Lagerloef Trading Co., West Tacook, 3,042 bls. 500 tons chemical pulp.

NORFOLK IMPORTS

WEEK ENDING NOVEMBER 29, 1924.

Lagerloef Trading Co., Jan, 762 bls., 15 tons chemical pulp.

Inspects Kalamazoo Conditions

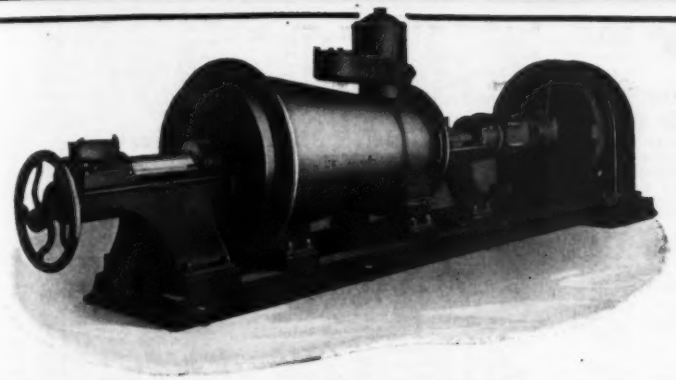
[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., December 1, 1924.—An inspection of conditions in the Kalamazoo valley district is being made by Arthur Huggins, Holyoke, Mass., sixth vice president of the International Papermakers Union. Mr. Huggins has been in the city for several days and plans to have his final report ready to submit to the executive committee of the organization, which meets early in January at the headquarters office, Albany.

"Our agreement with the paper mills expires May 1," said Mr. Huggins. "It will be my aim to have completed the survey here, so that the executive board can act regarding conditions in Kalamazoo. There was a time when the local union was very strong and active, but the membership has slumped off badly and interest seems to be lacking. Whether or not it will pay us to build up the organization here again remains to be seen. What I might have to say I will say to the executive committee, leaving it to them to act on my recommendations."

Superintendent of Ft. Griswold Co.

MONTVILLE, Conn., December 1, 1924.—Arthur J. Wirth, formerly with the Fort Orange Paper Company, Castleton, N. Y., is now Superintendent of the Fort Griswold Paper Co., Montville, Conn.



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PULP AND PAPER

We continue to maintain at the top the quality of Excelsior Felts, as we have done since we, as pioneers, made the first endless paper machine felts manufactured in America.

Seamless felts for fast running.
Satin Style felts for finish.
Special felts to meet every condition.
Send us your felt problems.

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HAFSLUND NORWAY — "HAFSLUND BEAR" Bleached Sulphite

F: HAGA — "FORSHAGA" Bleached Sulphite

KRAFT HURUM — "HURUM SPECIAL" Extra Strong Kraft

NORWAY SPECIAL
KOOS
BAC — "BAMBLE" Extra Strong Kraft

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A Remarkable Range of Grades, Textures and Weights

Orr Endless Felts can now be obtained up to 86 feet in length.

With our enlarged new equipment we can now furnish Paper Manufacturers with endless felts up to 86 feet in length.

Paper Manufacturers who carefully check manufacturing costs, and also strive to produce more and better paper at a lower cost per ton, prefer the unvarying quality and long service of ORR felts. A trial of them will bring about a preference that will be lasting.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

Stocks	BID	ASKED
Abitibi Power and Paper Company, Ltd.	63⅞	64
Abitibi Power and Paper Company, Ltd., Pfd.	98¾	99
American Writing Paper Company, Pfd.	4½	5½
Brompton Pulp and Paper Company, Ltd.	32	32¼
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	51	51⅛
International Paper Company, Pfd.	72½	73½
Laurentide Company, Ltd.	84	84½
Price Brothers	36	36¼
St. Maurice Paper Co., Ltd.	84	86
Smith (Howard) Paper Mills, Ltd.	29	30
Spanish River Pulp and Paper Mills, Ltd.	104½	104¾
Spanish River Pulp and Paper Mills, Ltd., Pfd.	114	115
Union Bag and Paper Corp.	48½	49½
Wayagamack Pulp and Paper Company, Ltd.	35	36
West Virginia Pulp and Paper Company	53	55

Bonds	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934	100	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940	96	98
Abitibi Power and Paper Company, Ltd., Con. 8s 1931	102½	103½
Belgo Canadian Paper Company, 1st 6s 1943	96¾	97¼
Brown Company Serial 6s	99½	100
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944	94	95
Donnacona Paper Company, Ltd., 1st 6s 1940	98	100
Eddy Paper Company, 1st 7½s 1931	94	95
Gair (Robert) Company, 1st 7s 1937	99	99¼
International Paper Company, 1st and Ref. 5s (Series "B") 1947	86½	87
Mattagami Pulp and Paper Company, 1st 6s 1937	58	60
Mattagami Pulp and Paper Company, 1st 7s 1949	20	25
Oswego Falls Corporation, 1st 8s 1942	101½	102
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	98	100
Parker, Young Company, 1st 6½s 1944	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	97½	99½
Peshtigo Paper Company, 1st 7s (Series "B") 1942	92	94
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943	98¼	99¼
Provincial Paper Mills, Ltd., 1st 6s 1940	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929	25½	30
Riordon Pulp and Paper Company, Ltd., 6s 1942	91	93
Riordon Company, Ltd., 1st and Ref. 8s 1940	96¾	97
River Raisin Paper Company, 1st 8s 1936	103	104
Smith (Howard) Paper Mills, Ltd., 6s 1934	95	95½
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941	90	95
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931	102½	103
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	106	106½
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper

F. o. b. Mill

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.65	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.15	@ 4.40
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.50	@ 8.75
Coated and Enamel	9.00	@15.00
Lithograph	9.00	@14.00
Tissues—		
White No. 1	.75	@ .90
White No. 2	.70	@ .80
Colored	1.05	@ 1.90
Anti-Tarnish	1.40	@ 2.30
Kraft	.90	@ 1.00
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	5.00	@ 5.75
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.00	@
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.00
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.50	@ 2.75
S. Screening	3.25	@ 3.75
Card Middler	4.00	@ 5.00

Boards—per ton—		
News	37.50	@42.50
Straw	50.00	@55.00
Chip	35.00	@40.00
Binders' Boards	75.00	@80.00
Sgl. Mla. Lt. Chip	55.00	@62.50
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	35.00	@40.00

(F. o. b. Mill)

No. 1 Domestic	27.50	@34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.50
Easy Bleaching	2.90	@ 3.20
No. 1 strong unbleached	2.75	@ 3.25
No. 2 strong unbleached	2.50	@ 2.75
No. 1 Kraft	2.75	@ 3.00
Sulphate—		
Bleached	3.50	@ 3.65

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.45	@ 4.50
Easy Bleaching Sulphite	2.70	@ 3.25
News Sulphite	2.45	@ 2.75
Mitscherlich	3.20	@ 3.75
Kraft (Domestic)	2.70	@ 3.50
Soda Bleached	3.90	@ 4.10

Domestic Rags

New Rags

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	15.00	@16.00
New White, No. 2	7.50	@ 8.00
Silesias, No. 1	9.75	@10.25
New Unbleached	13.50	@14.50
Washables	8.00	@ 8.50
Fancy	8.25	@ 9.25
Blue Overall	9.00	@10.00
New Blue	6.00	@ 6.50
New Black Soft	5.75	@ 6.20
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	5.50	@ 6.50
Men's Corduroy	6.00	@ 6.75
New Canvas	8.00	@ 8.25
New Black Mixed	3.75	@ 4.00

Old Rags

White, No. 1—		
Repacked	6.30	@ 6.55
Miscellaneous	5.55	@ 5.80
White, No. 2—		
Repacked	4.25	@ 4.50
Miscellaneous	3.75	@ 4.00
St. Soiled, White	3.00	@ 3.50
Thirds and Blues—		
Repacked	4.00	@ 4.25
Miscellaneous	3.00	@ 3.25
Black Stockings	3.50	@ 3.75
Roofing Rags—		
Cloth Strippings	1.93	@ 2.05
No. 1	2.40	@ 2.50
No. 2	2.30	@ 2.40
No. 3	1.20	@ 1.30
No. 4	1.20	@ 1.30
No. 5A	1.80	@ 1.50

Foreign Rags

New Light Silesias	7.50	@ 8.75
Light Flannelettes	8.00	@ 8.25
Unbl'chd Cottons	9.50	@10.00
New White Cuttings	11.50	@12.50
New Light Oxfords	7.75	@ 8.25
New Light Prints	7.25	@ 7.75
New Mixed Cuttings	3.25	@ 3.75
New Dark Cuttings	3.00	@ 3.50
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.00	@ 8.00
No. 3 White Linens	6.00	@ 6.50
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.50	@ 5.00
Ord. Light Prints	3.00	@ 3.50
Med. Light Prints	2.40	@ 2.50
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	3.00	@ 3.25
Ger. Blue Linens	3.50	@ 4.00
Checks and Blues	2.25	@ 2.50
Dark Cottons	2.60	@ 2.75
Shoppery	1.40	@ 1.60
French Blues	3.25	@ 3.75

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	2.05	@ 2.15
Domestic	2.10	@ 2.25
Wool, Tares, light	1.70	@ 1.80
Wool, Tares, heavy	1.70	@ 1.80
Bright Bagging	1.70	@ 1.80
Sound Bagging	.90	@ 1.00
Manila Rope—		
Foreign	6.25	@ 6.50
Domestic	6.50	@ 6.75
New Bu. Cut	2.35	@ 2.65
Hessian Jute Threads—		
Foreign	2.50	@ 2.75
Domestic	2.10	@ 2.20

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.60	@ 3.90
Hard, White, No. 2	3.25	@ 3.50
Soft, White, No. 1	2.80	@ 3.00
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag.	1.45	@ 1.55
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.60	@ 1.70
New B. B. Chips	.50	@ .55
Manilas—		
New Env. Cut	2.45	@ 2.60
New Cut. No. 1	1.75	@ 2.00
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	1.00	@ 1.10
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.05	@ 2.15
News—		
No. 1 White News	1.85	@ 1.95
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.95	@ 1.05
No. 1 Mixed Paper	.65	@ .75
Common Paper	.50	@ .68

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
R. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.30	@ .31
Light, 18 basis	.28	@ .30
Jute Wrapping, 3-6 Ply—		
No. 1	.20	@ .23
No. 2	.18	@ .20
Tube Rope—		
4-ply and larger	.15	@ .17
Fine Tube Yarn—		
5-ply and larger	.20	@ .28
4-ply	.21	@ .24
3-ply	.22	@ .25
Unfinished India—		
Basis	.14	@ .15
Paper Makers' Twine		
Balls	.12	@ .13
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.20	@ .40
Amer. Hemp, 6	.30	@ .32
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .12
Sisal Lath Yarn—		
No. 1	.14	@ .15
No. 2	.11	@ .13
Manila Rope	.18	@ .19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill

All Rag Bond	35	@ 40
No. 1 Rag Bond	25	@ 35
No. 2 Rag Bond	14	@ 25
Water Marked Sulphite	9	@ 12
Sulphite Bond	7	@ 10¾
Sulphite Ledger	9½	@ 12
Superfine Writing	18	@ 24
No. 1 Fine Writing	14	@ 18
No. 2 Fine Writing	12	@ 14
No. 3 Fine Writing	9	@ 12
No. 1 M. F. Book	5½	@ 7½
No. 1 S. & S. C. Book	6½	@ 7¾
Coated Book	8	@ 10
Coated Label	8	@ 10
News—Rolls, mill	3¾	@ 4½
News—Sheets, mill	4	@ 4¾
No. 1 Manila	4½	@ 5½
No. 1 Fibre	5	@ 5¾
No. 2 Manila	3¾	@ 4½
Butchers' Manila	4	@ 4¾
No. 1 Kraft	5¾	@ 6¼
No. 2 Kraft	4¾	@ 5
Wood Tag Boards	4¾	@ 6
Sulphite Screenings	2½	@ 2¾
Manila Tissue, 24x36 sheet	7	@ 7½
White Tissue, 20x30 sheet	7	@ 7½
Boards, per ton—		
Plain Chip	45.00	@47.50
Solid News	47.50	@50.00
Manila Line Chip	57.50	@60.00
Container Lined—		
85 Test	67.50	@70.00
100 Test	72.50	@75.00

Old Papers

F. o. b. Chicago

Shavings—		
No. 1 Hard White	3.25	@ 3.55
White Envel. Cuttings	3.40	@ 3.50
No. 1 Soft Shav.	3.00	@ 3.05
No. 1 Mixed	1.75	@ 1.85
No. 2 Mixed	1.65	@ 1.70

Ledger and Writings	1.60	@	1.70
Solid Books	1.55	@	1.60
No. 1 Light Books	1.15	@	1.20
Blanks	2.10	@	2.15
Ex. No. 1 Manila	2.60	@	2.65
Manila Envelope Cuttings	2.75	@	—
Folded News (overissue)	.95	@	1.00
Old Newspapers—			
No. 1	.85	@	.90
No. 2	.80	@	.85
Mixed Papers—			
No. 1	.77½	@	.80
No. 2	.70	@	.72½
Straw Clippings	.85	@	—
Binders' Clippings	.80	@	
Kraft	2.30	@	2.35
New Kraft Cuts	2.70	@	2.75
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	$45.00	@	—
No. 2	43.00	@	—
No. 3	41.00	@	—
No. 4	40.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09	@	.53
Ledgers	.13½	@	.40
Writings—			
Superfine	.13½	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.08	@	.11
Book, S. S. & C.	.09¼	@	.12½
Book, Coated	.11½	@	.20
Coated Lithograph	.10	@	.13
Label	.10	@	.13
News	.04¼	@	.05
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.07	@	.10
Manila No. 2	.06	@	.08
No. 2 Kraft	.05	@	.08
No. 1 Kraft	.07	@	.08
Common Bogus	.03½	@	.04
Straw Board	55.00	@	60.00
News Board	42.50	@	—
Chip Board	40.00	@	42.50
Wood Pulp Board (Carload Lots)	2.75	@	3.00
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	1.75	@	1.85
Domestic	1.60	@	1.70
Manila Rope	5.00	@	5.50
Sisal Rope	2.50	@	—
Mixed Rope	1.25	@	—
Scrap Burlaps	1.15	@	1.20
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.00	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.75	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.75	@	3.80
No. 2 Hard White	3.25	@	3.40
No. 1 Soft White	2.75	@	3.00
No. 2 Soft White	2.00	@	2.25
No. 1 Mixed	2.00	@	—
No. 2 Mixed	1.25	@	1.30
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.50	@	1.75
No. 1 Books, heavy	1.45	@	1.60
No. 2 Books, light	1.15	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.75
Container Manila	1.10	@	1.15
Old Kraft	2.00	@	2.25
Overissue News	1.05	@	1.10
Old Newspaper	.65	@	.70
No. 1 Mixed Paper	.75	@	.80
Common Paper	.60	@	.70
Straw Board, Chip	.65	@	.70
Binders Bd., Chip	.65	@	.70

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13	@	.14
New White, No. 2	.07	@	—
Silesias, No. 1	.08	@	.08¼
New Unbleached	.11¼	@	.11½
Washable	.05½	@	.05¾
Fancy	.07	@	.07¾
Cottons—according to grades—			
Blue Overall	.08¼	@	.09
New Blue	.03¼	@	—
New Black Soft	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.09	@	.09¾
New Black Mixed	.05	@	.05¾

Old

White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05½
Miscellaneous	.04¼	@	.05⅛
Thirds and Blues—			
Repacked	3.40	@	3.60
Miscellaneous	3.15	@	3.25
Black Stockings	4.00	@	4.25
Roofing Stock—			
No. 1	2.30	@	2.40
No. 2	2.20	@	2.30
No. 3	1.25	@	1.35
No. 4	2.10	@	2.20
No. 5A	1.40	@	—
B	1.25		nominal
C	1.15		nominal

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.65	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.25	@	—
No. 2 M. F. (carloads)	8.25	@	—
No. 3 M. F. (carloads)	7.75	@	—
No. 1 S. C. (carloads)	9.75	@	—
No. 2 S. C. (carloads)	8.75	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	28.00	@	30.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	50.00	@	55.00
Sulphite, bleached	80.00	@	—
Sulphate	65.00	@	70.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.60	@	—
Soft White Book shavings	3.00	@	—
White Blk. News	1.80	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.50	@	—
Light and Crumpled Book Stock	1.35	@	—
Ledgers and Writings	1.75	@	—
Solid Ledgers	1.75	@	—
Manilas—			
New Manila Cut	—	@	1.60
Printed Manilas	1.20	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News	.90	@	—
No. 1 Mixed Papers	.70	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto	Per lb.		
No. 1 White shirt cuttings	.15	@	.15¼
No. 2 White shirt cuttings	.07½	@	.08
Fancy shirt cuttings	.09	@	.09½
No. 1 Old Whites	—	@	—
Third and blues	.05½	@	.05¾
	Per cwt.		
Black stockings	.04	@	—
Roofing stock:			
No. 1	2.20	@	—
No. 2	2.10	@	—
Manila rope	.06½	@	.06¾
No. 2	1.55	@	—

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag Content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.14
Rag Content	.16	@	.33½
All Rag	.36½	@	.51
Writings	.08½	@	.20
Superfines	.20	@	.48
News	.04	@	.06½
Book, M. F.	.06½	@	.10¾
Book, Super	.07½	@	.11
Book, Coated	.09½	@	.20
Coated Litho	.10	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.12	@	.13
Manila, Sul. No. 1	.05	@	.06
Manila, Sul. No. 2	.03¾	@	.04¼
No. 1 Kraft	.06½	@	.06½
No. 2 Kraft	.05¾	@	.05½
Common Bogus	.03½	@	.04
Straw Board	50.00	@	55.00
News Board	47.50	@	50.00
Chip Board	45.00	@	47.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	4.25
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White	3.10	@	3.25
No. 2 Soft White	2.25	@	2.50
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	2.25
Writing Paper	—	@	1.70
No. 1 Books, Heavy	1.60	@	1.80
No. 1 Books, Light	1.40	@	1.50
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	1.20
Old Newspapers	.90	@	1.00
No. 1 Mixed Paper	.70	@	.75
Box Board, Chip	.70	@	.75

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	1.12½	@	2.00
Domestic	2.00	@	2.12½
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	1.62½
Scrap Burlaps	1.25	@	1.50
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.50	@	1.62½
New Burlap Cuttings	2.00	@	2.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.13½	@	.14
Silesias, No. 1	.09	@	.09½
New Unbleached	.12½	@	.13
Washable	.06	@	.06½
Fancy	.07	@	.07¼
Cottons — according to gradea, Blue Overall	.09½	@	.10
New Blue	.05½	@	.06
New Black, soft	.06	@	.06¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.50	@	7.00
White No. 2—			
Repacked	5.50	@	6.00
Miscellaneous	4.75	@	5.50
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	3.00	@	3.25
Roofing Stock—			
No. 1	2.25	@	2.37
No. 2	2.12½	@	2.25
No. 3	1.50	@	1.75
No. 4	1.15	@	1.20

Decline in Austrian Production

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 3, 1924.—August returns for Austrian paper and pulp production and exports show slight declines from the July level but no material departure from the volume maintained since the first of the year says a report to the Paper Division of the Department of Commerce from Assistant Trade Commissioner Baldwin at Vienna. The report in part continues:

"The output during the 8 months period ended August 31, amounted to: paper, 115,307 metric tons; board, 30,920 tons; chemical pulp 57,960 tons; and mechanical pulp 57,960 tons. Exports during the same period were as follows: paper, 60,257 tons; board, 18 730 tons; and mechanical pulp, 60,381 tons."

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, December 3, 1924.

December 1 found the paper market in the most encouraging shape it has been in for a long time. The attitude of the buyers has at last undergone a change. They have long been buying only for immediate needs with scant thought of the future but are now loosening up and frequent orders are being booked far into the future. It shows that they are imbued with a new confidence and a genuine confidence to replace the artificial confidence which they attempted to assimilate during a long period of uncertainties.

When the complete story of the paper business for the year is written it will be the story of a year of hope with hope constantly frustrated. Fall business did not materialize as was expected nor did it improve as Fall progressed in any such manner as had been anticipated. The next hope was that following the election business would at last come into its own. It failed to do so with the impetus expected of it but a marked improvement was noted as December approached and now, for the first time in months, there is something like buoyancy in the market. Once more hope reaches forward to the first of another year and this time there is every indication that the hope will be realized to its full and the paper men are confident that, unless something entirely unforseen should occur, 1925 will prove a banner year and one which will atone for the shortcomings of the present year.

News is today moving in a satisfactory manner. The mills are constantly improving their production and orders are being received for delivery far into the future.

Fine papers are in good demand and are showing constant improvement. Kraft is doing nicely and wrapping paper is undergoing a genuine impetus.

The holiday demand for all those grades which enjoy a special holiday call is said to be not far from normal although many of the orders have been placed at an unusually late date this year.

Mechanical Pulp

Mechanical pulp continues to move along satisfactorily with no change in price. There is little distress stock in the market and what little there is is being taken up about as quick as it makes its presence known.

Chemical Pulp

The chemical pulp demand is particularly good just now and sales of the higher grades are being made at a better figure than has been quoted for some time. On several grades the price has been advanced. Pulp men say that they are now booking orders for most of 1925, many orders being placed for six and eight months ahead. This makes the pulp men unusually sanguine that business in their branch will make 1925 a banner year.

Old Rope and Bagging

The old rope demand is improving and stock still continues to be somewhat scarce. Collections have picked up however which should help relieve the scarcity soon. The bagging market is trailing old rope with conditions improving.

Rags

The demand for rags is showing steady improvement and the mills the taking a greater interest in them than for some time past. There is a tendency to a price advancement. Roofing rags are still enjoying a good demand.

Waste Paper

There is a more liberal call for the better grades of waste papers. The lower grades are lagging behind but have showed some improvement during the past week.

Twine

Twine is becoming more active. There was a long period during which the market was almost flat and orders are coming in now that were held back months ago. The prices are holding firm.

PAPER AN INDEX OF CIVILIZATION

(*Continued from page* 44)

quackery devasting the world. Law without paper is but the will of the local chieftain; religion without paper becomes a myth or a memory; without paper, the forces now held in check by knowledge and agreement would be loosed; a chaos of contending forces would come on, beside which, the break-up of the Roman Empire would be as a child playing with toy soldiers.

Lacking paper, standards would be lost; hungry and unkempt mobs would surge through our streets as in the days of the commune of Paris. We should see a general break-up like the recent break-up of Russia but infinitely worse because irremediable. The age following would be like the Middle Ages, but darker, because with no prospect of light.

We speak of printing as the cause of the new birth of civilization following the dark ages. We should speak of paper. The Romans printed with type on metal but not until we had paper could ideas be exchanged and recorded in the volume necessary to change civilized life completely.

The permanence of good paper is one of the wonders of the world. Paper made from cotton rags is in existence dating from the year 860 A. D. or more than 1,000 years old. The oldest legal document on paper is a deed of the Norman King, Roger of Sicily, over 800 years old. This also, was made from cotton rags.

Due to the natural qualities of wood and the drastic treatment necessary to making it into paper, wood papers are temporary. Wood newsprint, for instance, is so short-lived that papers a few months old turn brown and fall to pieces, under handling. Papers made from pure, new rags, however, are capable of outlasting a millenium—a period sufficient for customs, ideals, and even language to change utterly. Rag paper stands like a monument among the ravages of time.

Increased Uses of Paper

The increased uses of paper in this country have been a part of our increasingly organized society. When a Revolutionary patriot lived in a small town and procured all his necessities in that town, there was no need of letter writing or advertising. When goods come from a distant State, all these things are necessary in an increasing ratio. We are now enlarging the boundaries of trade from the state to the nation and from the nation to the world.

The telegraph, cable, airplane and radio are bringing Yokohoma closer to New York than Boston was in the days of the Revolution. The "commercial community" will shortly be the world and the use of paper will increase in geometrical ratio. If paper increases in the next twenty-five years as rapidly as it has in the past, the production in the United States will be twenty-five million tons in 1950. From the consideration that our market is coming to be the world and from the consequent increasing necessity for complete information in the form of correspondence advertising, "foreign news," labels and packages for shipment, it seems altogether probable that the rate of increase will be greater than in the past. This is to say, that in 1950 we may be producing and using more than twenty-five million tons of paper.

Specialties Paper Co.'s Liabilities $134,000

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., December 2, 1924.—The statement of assets and liabilities as sent out to the 20 creditors of the Specialties Paper Company of this city show liabilities of about $134,000 and assets of perhaps $7,100. Inventory shows merchandise and accounts to the value of about $2,500 and machinery and equipment of about $4,600.

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, December 3, 1924.

While the chemical market continues in a fair condition there is nothing yet to justify the hopes which were advanced a month ago that a quick pick-up would follow election. There is every indication at the present time, however, that there will be improvement of no slight character before the end of the year and a more marked improvement directly after the first of the year. There is still uncertainty regarding prices on many commodities for another year and there is a consequent disposition to continue buying for immediate needs only.

BLANC FIXE.—The past week brought no change in the condition of blanc fixe. The demand is just about the same although there is more inquiry regarding it. The price remains from $75 to $80 a ton for the powder and from $50 to $55 for the pulp.

BLEACHING POWDER.—The recent announcement of the new schedule on bleaching powder has not resulted in the booking of any additional business. The announcement gave no incentive to buyers to buy for the future and so the hand to mouth buying continues and will probably continue until after the first of the year. The price continues at from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—Caustic Soda is doing nicely and the demand is looking upward with the promise of much better business soon. One of the largest makers has come out with an announcement of the new price which is the same as has been asked for some time—from 3.10 to 3.15 cents a pound.

CASEIN.—Casein showed a little more vigor during the past week than it has been showing and it is believed that it will show further stimulation from now on. The price ranges from 10 to 11 cents a pound.

CHINA CLAY.—Business in China clay is running very smoothly. The demand is good and the price holds firm. It is quoted at from $16 to $20 a ton for the imported grades and from $12 to $15 a ton for the domestic grades.

CHLORINE.—The same condition prevails in regards to chlorine as has already been outlined in the case of bleaching powder. There has been no change in price, the present quotation being from 4.50 to 7 cents a pound in tanks.

ROSIN.—The tendency of rosin to rise in price was actually realized during the past week. There is a very excellent demand. The price is now ranging from $6 to $6.25 a barrel.

SALT CAKE.—Salt cake remains in about the same condition although there is a somewhat better inquiry and although there has been a slight improvement in the business done during the last few weeks. Manufacturers are not pressed for tonnage. Such quantities as they have piled up are being disposed of and they are doing no worrying and showing no inclination to make any cheaper price. It is now bringing from $17 to $20 a ton.

SODA ASH.—There is nothing new to be said regarding soda ash. The demand is fair and the price continues at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—The demand for sulphate of alumina is one of the bright features of the market and the past week saw the price go up $2 a ton in the Eastern market. Western manufacturers are still quoting a somewhat lower contract schedule. The new price is from 1.40 to 1.45 cents a pound for the commercial grade at the Eastern works and from 2.20 to 2.35 cents a pound for the iron free.

SULPHUR.—Nothing new has been reported regarding sulphur. The price holds firm, the demand is moderate and no concessions are being made. The price is from $18 to $19 a ton.

TALC.—While doing a little better, talc is still far from being a lively commodity. The demand undergoes no increase and the price still remains at from $16 to $17 a ton.

Potdevin Machine Co. Adds New Lines

The Potdevin Company, 1221 38th street, Brooklyn, N. Y., has recently made some interesting additions to its line of paper bag machinery.

Among the more recent developments is a machine using a roll of paper up to 30 inches wide which is slit, cut into sheets, printed on the back in one or two colors and which provides for the hand-feeding of borders which are pasted to the slit and cut sheets. This machine is for the use of the wall paper trade in making up sample books.

Two individual Middle Western concerns have recently purchased some of this company's Type 290 2-color printing flat and square paper bag machinery, for making and printing flat and square glassine or other paper bags in the one operation direct from the roll.

It might also be stated that as a result of the last Paper Show the company recently received an order from a large and progressive paper concern in Alcoy, Spain, which intends to install some of the firm's 2-color printing flat and square paper bag machinery.

Millinery and laundry bag machines printing in either one or two colors, either in the web or after the bag is made are now listed among the concern's products. Coke, coal, flour and wood sacks made on three different sizes of their sack machines can now be cared for by a two-color press which prints the web before the sack is made and so designed that the sacks are made and printed in a continuous operation.

Within the past few years Potdevin's business has become more or less international in character, shipments having been made to Cuba, Mexico, Brazil, England, Spain, Greece, Japan, Australia, and even far-off South Africa, where they have equipped three separate plants that now use the American type of self-opening square bags.

Santo Domingo Imports

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 3, 1924.—American Consul Hosmer at Santo Domingo reporting to the Paper Division of the Department of Commerce states that paper and paper manufactures imported into the Dominican Republic increased from 125,683 in 1913 to 335,430 in 1923. American products during the past five years have enjoyed a practical monopoly of the market says the report from 80 to 95 per cent each year of the total imports. Imports from Germany last year were valued at $28,000 most of which consisted of wrapping paper and paper bags. German exporters are reported to have been able to undersell their competitors by 20 per cent.

Mr. Taylor Returns from Sweden

A. J. T. Taylor, of Toronto, a well known Canadian engineer, has returned from a tour of Europe, bringing many important power plant improvements. He went abroad for the purpose of studying the generation and distribution of steam in pulp, paper and textile industries. Mr. Taylor was officially received by the members of the Swedish government. He found that Sweden's forests are not to be compared in either the quantity or quality of the raw materials of pulp and paper, but that in all the problems connected with the turning of spruce into pulp and paper, Sweden leads the world. Mr. Taylor specially mentioned Ruths Steam Accumulator, the Nordstrom Waste Wood Dryer and the Volta High Potential Electric Boiler.

Paper Company Changes Name

SPRINGFIELD, Mass., December 3, 1924.—On December 1, the name of the Eastern Paper and Supply Company, was changed to Meek Paper Company. There is no change in management, Mr. William N. Meek is proprietor as before.